

SCREENING SITE INSPECTION REPORT
FOR

MAPCO GAS PRODUCTS, INC.
aka THERMOGAS COMPANY

ATHENS, ILLINOIS

U.S. EPA ID: ILD042849547

SS ID: NONE

TDD: F05-8810-017

PAN: FILO483SB

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ecology and environment, inc.

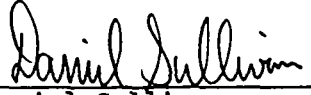
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1. INTRODUCTION

Ecology and Environment, Inc., Field Investigation Team (FIT) was tasked by the United States Environmental Protection Agency (U.S. EPA) to conduct a screening site inspection (SSI) of the Mapco Gas Products, Inc. (Mapco), site under contract number 68-01-7347.

The site was initially discovered by the Illinois Environmental Protection Agency (IEPA) in 1977. The site was discovered after IEPA received a complaint from Jim Watkins, a former employee of Mapco, stating that rinse water from agricultural chemical tanker trucks is drained into a quarry pit located adjacent to the site (IEPA 1977).

The site was evaluated in the form of a preliminary assessment (PA) that was submitted to U.S. EPA. The PA was prepared by Kenneth W. Corkill of IEPA. The PA is dated April 28, 1986.

FIT prepared an SSI work plan for the Mapco site under technical directive document (TDD) F05-8612-061, issued on December 17, 1986. The SSI work plan was approved by U.S. EPA on October 14, 1988. The SSI of the Mapco site was conducted on June 13, 1989, under TDD F05-8810-017, issued on October 19, 1988.

The FIT SSI included an interview with a site representative, a reconnaissance inspection of the site, and the collection of six soil samples, one surface water sample, and four residential well samples.

The purposes of an SSI have been stated by U.S. EPA in a directive outlining Pre-Remedial Program strategies. The directive states:

All sites will receive a screening SI to 1) collect additional data beyond the PA to enable a more refined

preliminary HRS [Hazard Ranking System] score, 2) establish priorities among sites most likely to qualify for the NPL [National Priorities List], and 3) identify the most critical data requirements for the listing SI step. A screening SI will not have rigorous data quality objectives (DQOs). Based on the refined preliminary HRS score and other technical judgement factors, the site will then either be designated as NFRAP [no further remedial action planned], or carried forward as an NPL listing candidate. A listing SI will not automatically be done on these sites, however. First, they will go through a management evaluation to determine whether they can be addressed by another authority such as RCRA [Resource Conservation and Recovery Act].... Sites that are designated NFRAP or deferred to other statutes are not candidates for a listing SI.

The listing SI will address all the data requirements of the revised HRS using field screening and NPL level DQOs. It may also provide needed data in a format to support remedial investigation work plan development. Only sites that appear to score high enough for listing and that have not been deferred to another authority will receive a listing SI. (U.S. EPA 1988)

U.S. EPA Region V has also instructed FIT to identify sites during the SSI that may require removal action to remediate an immediate human health or environmental threat.

2. SITE BACKGROUND

2.1 INTRODUCTION

This section presents information obtained from SSI work plan preparation, the site representative interview, and the reconnaissance inspection of the site.

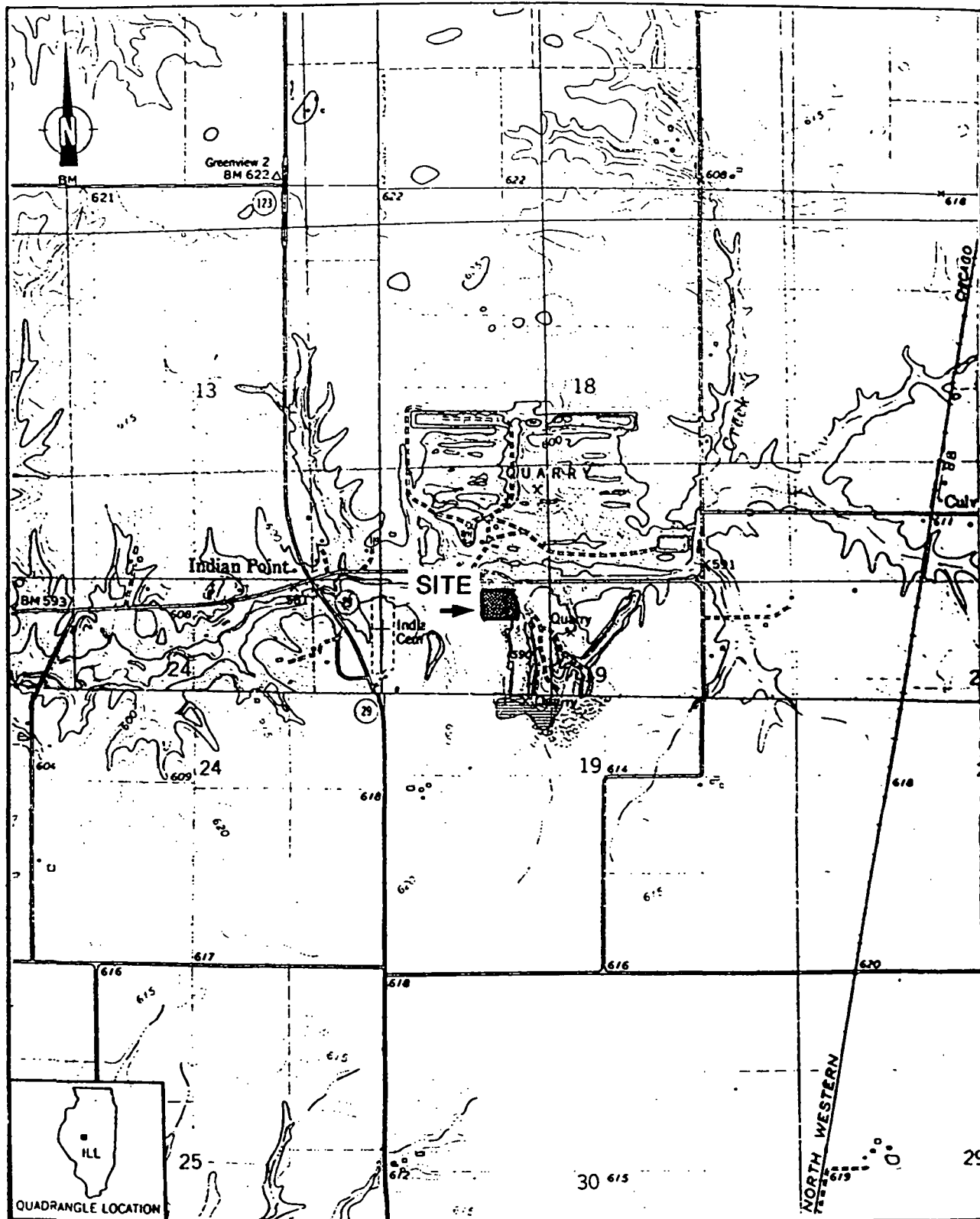
2.2 SITE DESCRIPTION

Mapco is an active agricultural product dealer that sells, mixes, and applies fertilizers, pesticides, and herbicides; the facility also sells propane gas (Ingram 1989). The facility is located on a 5-acre parcel of land in a sparsely populated area approximately 2 1/2 miles north-northwest of the city of Athens, Illinois, in Menard County (NW1/4NW1/4 sec. 19, T.18N., R.5W.), off of Rural Route 2, located approximately 1/2 mile east of Highway 29 on Indian Point Road (see Figure 2-1). A 4-mile radius map of the Mapco site is provided in Appendix A.

2.3 SITE HISTORY

Operations began at the site in 1955 with a company named Indian Point Farm Supply, which was founded by Loren E. Hopwood and Kennedy Kincaid (Ingram 1989). The company was sold to Mapco of Tulsa, Oklahoma, in 1968. Hopwood and Kincaid managed the operation for Mapco until 1984, when they retired.

In 1977, IEPA received a complaint from Watkins stating that Mapco rinsed fertilizer and herbicide trucks on-site, and that the rinse water drained to a quarry lake located east of the Mapco site. Hopwood, Vice



SOURCE: Ecology and Environment, Inc. 1990; BASE MAPS: USGS, Greenville, IL Quadrangle, 7.5 Minute Series, 1980; Athens, IL Quadrangle, 7.5 Minute Series, 1966, Photorevised 1976.

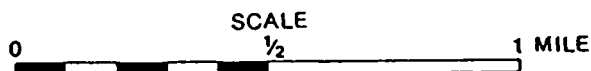


FIGURE 2-1 SITE LOCATION

President of Mapco at the time, denied that rinse waters from the washing of the trucks was being discharged to the quarry (IEPA 1977). During an inspection of the site in 1977, IEPA observed a 4-inch pipe on the western bank of the quarry. The pipe was connected to a drain that drained a small concrete pad where Mapco trucks were loaded; it also appeared that any spillage from filling sprayers with chemicals is collected on the pad and drains to the quarry (IEPA 1977).

On September 9, 1977, Watkins called IEPA and stated that he had worked for Mapco as a spray truck driver in 1976. Watkins stated that he would rinse the tank on his truck with approximately 200 gallons of water prior to filling the tank with new chemicals, and that the rinse water was discharged to the ground around the facility and would flow down a ditch to the quarry.

The discharge to the quarry was sampled by IEPA on August 3, 1977. Ammonia at 0.2 mg/L, alachlor (Lasso) at 0.24 µg/L, and Atrazine at 14.0 µg/L were detected in samples of the effluent (IEPA 1977). After visiting the Mapco site, IEPA found the facility to be in violation of section 12(a) of the state's Environmental Protection Act, which states: "No person shall cause or threaten or allow the discharge of any contaminants into the environment in any state so as to cause or tend to cause water pollution in Illinois;" IEPA also stated that Mapco should have the violation corrected immediately (Forneris 1977).

In 1980, Steven Hahn, of the State Journal Register, contacted Timothy R. Kluge, of IEPA, concerning Mapco. Hahn stated that the facility had been listed in a U.S. EPA report concerning chemical impoundment sites over areas of potentially useful groundwater. Hahn asked when the Mapco site had been last inspected, and Kluge stated that a note in the Mapco file stated that an investigation had been made in spring 1978 and no problems were observed. Hahn informed Kluge that Mapco had dug a small lagoon for storage of water from washing the outside of the herbicide application trucks. Kluge indicated that a permit was required for such construction and because a construction permit violation apparently existed at the Mapco site, IEPA would schedule an investigation as soon as other commitments allowed (IEPA 1980).

On October 22, 1980, IEPA conducted an inspection of the Mapco site. During the inspection, a lagoon was observed at the site. Two, polyvinyl chloride (PVC) inlet pipes, each approximately 4 inches in diameter, were observed to terminate in the lagoon. Hopwood indicated that one pipe drained a concrete loading pad and the other was a discharge from a septic tank (IEPA 1980a). When the lagoon became filled, the contents were pumped to a field south of the plant that was also owned by Hopwood.

In a letter to Hopwood, dated April 8, 1981, IEPA stated that Mapco Gas was in violation of the Illinois Pollution Control Board's rules regarding the construction of a wastewater storage lagoon and also for pumping the wastewater to the field without a permit (IEPA 1981). IEPA also stated that the septic tank discharge directly to the lagoon was possibly not in compliance with the Illinois Private Sewage Disposal Licensing Act and Code. IEPA recommended that the violations be corrected as soon as possible (IEPA 1981).

In 1984, IEPA conducted several inspections at the site. On January 12, 1984, IEPA inspected the site and reported that the facility was very neat and well managed (IEPA 1984). Hopwood and Kincaid had retired by this time, but were still financially involved with Mapco.

On April 12, 1984, IEPA issued a permit to Mapco for the on-site lagoon. The unlined lagoon was to be used only for the storing of washwater from agrochemical application vehicles and spillage at the concrete truck loading pad (IEPA 1984a). On April 16, 1984, IEPA conducted an interview with Tom Ostermeier, an employee at Mapco. Ostermeier stated that rainwater from the rear half of the building and septic tank waste were still draining to the lagoon (IEPA 1984b). IEPA also collected a sample from the quarry lake to determine whether any leachate from the pit had migrated to the lake.

During a site visit on June 1, 1984, IEPA observed a large spray truck circling the facility parking lot with the bottom valve on the tank open and a large stream of white liquid flowing from it (IEPA 1984c). Liquid was flowing from the area near the lagoon down the hill and into the lake.

After a site inspection on October 8, 1987, IEPA made the following recommendation to Mapco. (1) In order to be in compliance with the Act [Sections 9, 12(a), and 12(d)], 35 Ill. Adm. Code, Subtitle C: Water Pollution [Section 306.102(b)], regulations, the collection lagoon should be abandoned completely. (2) An alternate sewage disposal system should be provided. (3) A concrete pad and spill collection system should be provided at the chemical mixing and loading areas so that spill material can be contained and recycled or properly disposed. (4) Site security should be provided (IEPA 1987).

Mike Ingram, the current plant manager at Mapco, indicated that to his knowledge IEPA's last inspection of the facility had been in fall 1987. During this inspection, IEPA collected a groundwater sample from the on-site well; results of the sample are not available. There are currently no enforcement actions pending at the Mapco site.

3. SCREENING SITE INSPECTION PROCEDURES AND FIELD OBSERVATIONS

3.1 INTRODUCTION

This section outlines procedures and observations of the SSI of the Mapco site. Individual subsections address the site representative interview, reconnaissance inspection, and sampling procedures. Rationales for specific FIT activities are also provided. The SSI deviated from the U.S. EPA-approved work plan. During the reconnaissance inspection, FIT determined that a surface water sample needed to be collected. In addition, FIT did not collect five residential well samples, as had been proposed in the work plan. Only four residential well samples were collected.

The U.S. EPA Potential Hazardous Waste Site Inspection Report (Form 2070-13) for the Mapco site is provided in Appendix B.

3.2 SITE REPRESENTATIVE INTERVIEW

Ronnie Galmore, FIT team leader, conducted an interview with Mike Ingram, plant manager of the Mapco facility. The interview was conducted on June 12, 1989, at 3:00 p.m. on-site in Ingram's office. Deborah Barrett and Mike Phillips, both of FIT, were also present during the interview. The interview was conducted to gather information that would aid FIT in conducting SSI activities.

3.3 RECONNAISSANCE INSPECTION

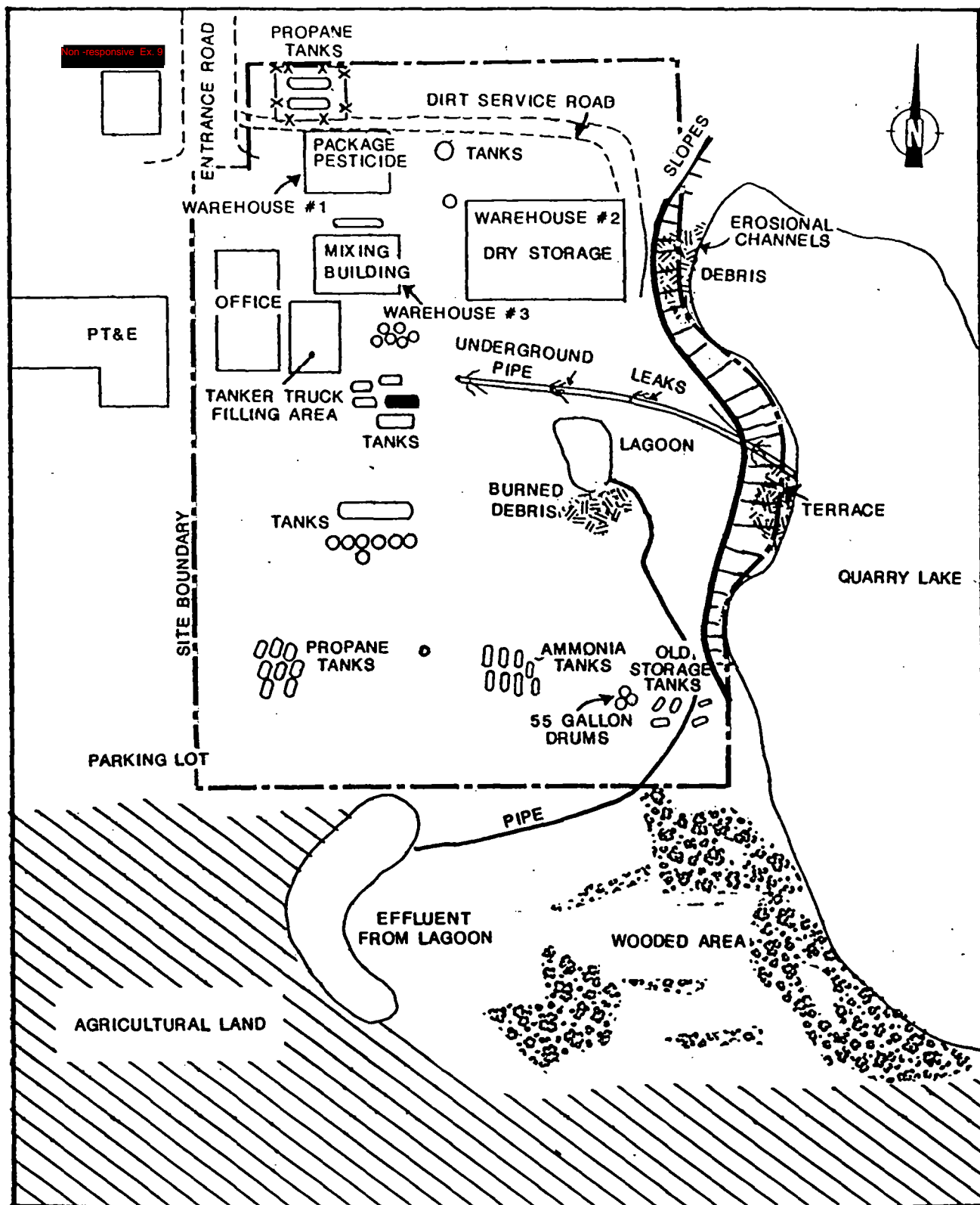
On June 13, 1989, FIT conducted a reconnaissance inspection of the Mapco site and surrounding area in accordance with Ecology and Environment, Inc. (E & E), health and safety guidelines. The reconnaissance

inspection was begun on June 13, 1989, at 9:45 a.m. The reconnaissance inspection included a walk-through of the site to determine appropriate health and safety requirements for conducting on-site activities and to make observations to aid in characterizing the site. FIT also determined sampling locations during the reconnaissance inspection. Ingram accompanied FIT during the reconnaissance inspection.

Reconnaissance Inspection Observations. The Mapco site is located on a small hill and is bordered by farmland and a small wooded area to the south (see Figure 3-1). Ingram stated that Mapco leases approximately 5 acres of land from Loren E. Hopwood (Ingram 1989). East of the site, and directly adjacent, is a quarry lake. Indian Point Road (a gravel road) and a commercial business, Material Service Corporation, which operates quarry pits, are located to the north of the site. Directly west, and adjacent to the site, are a residence, a commercial operation (PT & E, Inc.), and farmland. Land use surrounding the site is agricultural, commercial, and residential. Photographs of the Mapco site are provided in Appendix C.

East of the entrance road to the site, which is located off of Rural Route 2, and on-site, are two large propane tanks (18,000- and 12,000-gallon capacity) resting on concrete supports within a wire-fenced area. Also within this fenced area are smaller propane refill tanks sitting on a concrete platform. There are four buildings on-site, a main office building and three warehouses (numbered 1 through 3 by FIT), all owned by Mapco. Warehouse number 1 is used for storing chemicals in receptacles and was locked during the SSI.

Warehouse number 2 is used for storing dry chemicals; this warehouse has a concrete floor, and the storage areas are separated by concrete dividers. Warehouse number 3 is where the chemical products are mixed. Warehouse number 2 does not have a door. This warehouse is located approximately 30 feet from the top of a sloped bank that leads to the quarry lake. The floor of the warehouse was wet. Ingram stated that the building had possibly flooded. The rear entrance to warehouse number 2 is elevated approximately 5 feet from the surrounding terrain. The bank slopes approximately 30% down to the quarry lake and has several erosional channels. The channels are located approximately 45 feet



SOURCE: Ecology and Environment, Inc. 1990.

FIGURE 3-1 SITE FEATURES

from the rear entrance to the warehouse. The channels are approximately 3 to 6 inches in depth and drain down the bank and into the quarry lake. Down the slope, FIT observed refuse that consisted of tires, pesticide bags, concrete pieces, a small rusty storage tank, and a storage tank that was partly submerged in the quarry lake.

South of warehouse number 2 is an on-site temporary holding lagoon. The lagoon is used to hold water from the rinse pad, any spillage of chemicals from filling the spray tanker trucks, and waste from an on-site septic tank. The wastewater in the lagoon is left to seep into the ground or is pumped out using a portable pump. The wastewater is pumped to an adjacent farm field owned by Hopwood. The on-site lagoon is unlined and does not have a berm. Ingram stated that the lagoon has overflowed, but did not know the exact date (Ingram 1989). The liquid in the lagoon was dark brown. According to Ingram, the lagoon is to be drained and filled in with soil. The lagoon will be replaced by two 1,600-gallon aboveground temporary holding tanks. One tank will be used for septic tank outflow storage and the other one will be used to store rinse water and any spillage from filling the spray tanker trucks. The temporary holding tanks were to be put in place and ready for use during summer 1989. The water in the temporary holding tank is to be reused in the production of pesticides and herbicides. Mapco will also install berms around the tanks (Ingram 1989). Mapco also plans to build a new rinse pad for rinsing its spray tanker trucks. Mapco has a permit from IEPA (1988-EA-1157) for the preceding improvements.

Approximately 10 feet to the north of the on-site lagoon, FIT observed water seeping out of the ground. Ingram indicated that a water pipeline drawing from the quarry lake had several leaks, and that the water seeping out of the ground was from the broken pipes. The water and the underlying ground were an algae-green color. FIT also observed a leachate stream emanating from the lagoon and flowing to the quarry lake from the pipeline. The leachate stream was flowing east to a terrace that slopes 35% to the east, into the quarry lake.

FIT observed refuse located on the terrace, including fence wire, bricks, tire rims, paint cans, storage tanks, drums, pesticide containers, automobile parts, and refrigerators. Most of the refuse was made of iron or steel and was rusting.

Approximately 7 feet south of the on-site lagoon was another refuse pile. The pile of refuse appeared to have been burned. Based on the presence of ash at the bottom of the pile and an odor of burnt refuse, FIT believes that the refuse pile had been burned. The ashes of the pile were gray. In addition, a red, powdery substance and green, flake-like substance were also observed at the bottom of the pile. The refuse observed in the pile included wood, washing machines, paint cans, drums, automobile batteries, a pressure tank, automobile parts, a refrigerator, and several water heaters. Ingram stated that to his knowledge the site has never been used as a dump.

In the southeast corner of the site, FIT observed several large, old, dented, and rusting storage tanks. One of the storage tanks had been burned. According to Ingram, the old rusting storage tanks will be crushed and buried on-site. Mapco does not have a permit for this disposal, and is not aware that one is needed. Next to one of the old storage tanks were several 55-gallon drums. The following labels were observed by FIT on some of the drums: Dow (serve 24) Nitrogen Stabilizer, and Flammable Liquid. FIT observed a 5-gallon can in one of the drums; the drum also had liquid in it.

West of these old storage tanks, and located along the southern boundary of the site, FIT observed approximately 50 small anhydrous ammonia tanks, farm equipment, and small propane tanks.

Located north of the small ammonia and propane tanks are the storage and mixing tanks that are currently used in facility operations. Most of the tanks are rusting and FIT observed that one of the tanks had a large dent in the side of it. FIT observed a Mapco employee open a valve on one of the storage/mixing tanks and let the liquid flow onto the ground until the flow stopped. The area around some of the active storage and mixing tanks was wet, and in some places liquid of an algae-green color with an ammonia-like odor was present. FIT observed that topsoil in areas surrounding some of the dry areas around the storage and mixing tanks was an orange and yellowish color.

The area in which the site is located is mostly flat and is covered with gravel in some areas; exposed soil is present on the remainder of the site. The eastern boundary of the site slopes east toward the quarry lake. The northern boundary of the site slopes toward a gravel

road (Indian Point Road). The site is unfenced and access is not restricted. Mapco employs six persons at the site (Ingram 1989). During the reconnaissance inspection, FIT was unable to locate the pipe to the quarry lake, observed by IEPA, that drains the concrete pad where the spray tanker trucks are loaded.

3.4 SAMPLING PROCEDURES

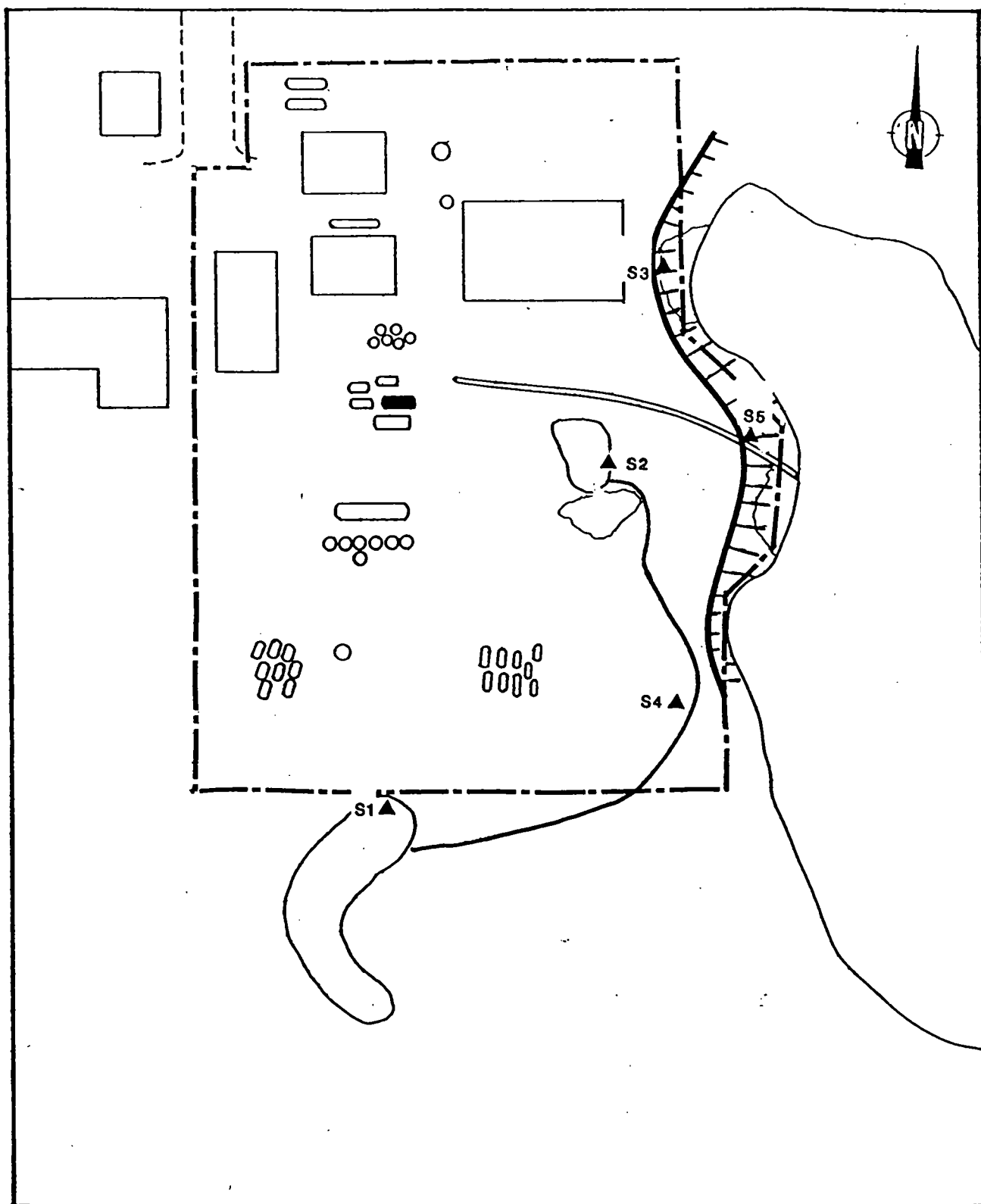
Samples were collected by FIT at locations selected during the reconnaissance inspection to determine levels of U.S. EPA Target Compound List (TCL) compounds and U.S. EPA Target Analyte List (TAL) analytes present at the site. The TCL and TAL, with corresponding quantitation/detection limits, are provided in Appendix D.

On June 13, 1989, FIT collected six surface soil samples, including one potential background soil sample, one quarry lake water sample, and four residential well samples. A portion of each soil sample, except the potential background soil sample, and a portion of the surface water sample were taken by Ingram.

Soil Sampling Procedures. Soil samples (indicated as S1 through S5) were collected from various locations throughout the site. Surface soil sample S1 was collected from along the southern boundary of the site near the field where the contents of the on-site lagoon are sprayed (see Figure 3-2). This location was chosen because vegetation was not growing in this sampling spot whereas only 1 to 2 feet from this spot, vegetation was growing, and because the lagoon effluent appeared to be draining to this location.

Surface soil sample S2 was collected from along the southern edge of the on-site lagoon. The location of surface soil sample S2 was chosen because the topsoil was a grayish brown color in some areas and a dull orange or a rusty brownish color in other areas. Surface soil sample S3 was collected from a runoff channel located approximately 40 feet east of the rear entrance to warehouse number two. Surface soil sample S3 was collected at this location because any runoff from the site or the warehouse could have migrated off-site via the erosional channels.

Surface soil sample S4 was collected from the southeastern section of the site, from an area where the old, unused storage tanks were ob-



SOURCE: Ecology and Environment, Inc. 1990.

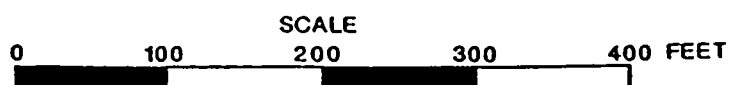


FIGURE 3-2 ON-SITE SOIL SAMPLING LOCATIONS

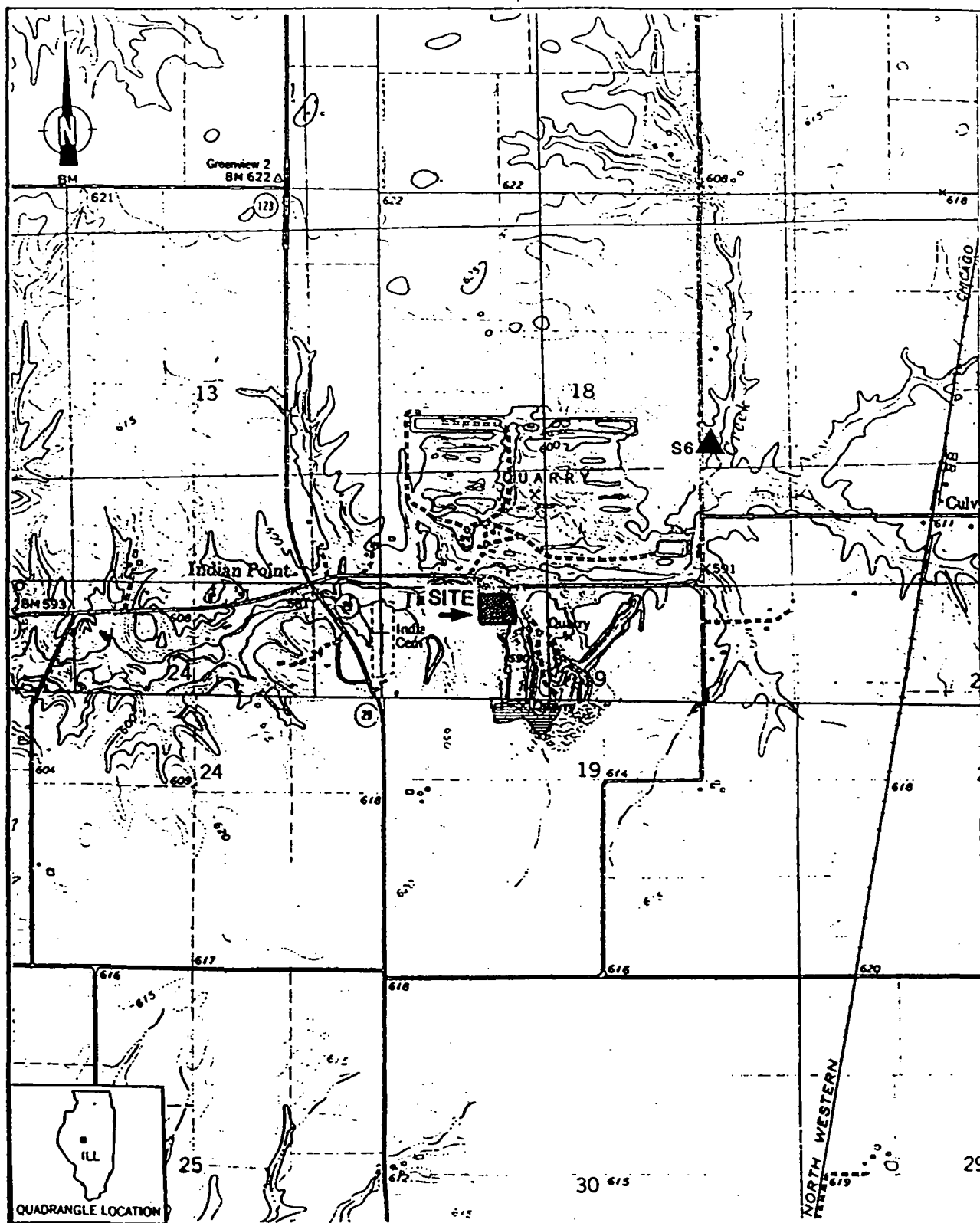
served. This location was chosen because the topsoil was a brownish gray color and the topsoil around the unused storage tanks was wet with an algae-green colored liquid. Surface soil sample S5 was collected approximately 45 feet east of the on-site lagoon from the bank that leads to the quarry lake. Sample S5 was collected at this location because leachate from the lagoon flows down this slope, and because refuse was located near the sampling point.

A potential background surface soil sample (S6) was collected on the eastern side of an asphalt road located approximately 3/4 miles northeast of the site (see Figure 3-3). The potential background soil sample was collected to determine the characteristic contents of the soil in the area surrounding the site. The location was chosen because the ground surface appeared to be in an undisturbed state.

Standard E & E decontamination procedures were adhered to during the collection all soil samples. The procedures included the scrubbing of all equipment with a solution of detergent (Alconox) and distilled water, and triple-rinsing the equipment (e.g., trowels, bowls, and spoons) with distilled water before the soil samples were collected. All soil samples were collected from a depth of 6 inches using a metal garden hand trowel. The samples were then transferred to a stainless steel bowl using the garden trowel. Samples were mixed in the bowl and then placed in sample bottles using a spoon (E & E 1987). (Samples to be analyzed for volatile organic compounds were placed directly into sample bottles.) All soil samples were packaged and shipped in accordance with U.S. EPA-required procedures.

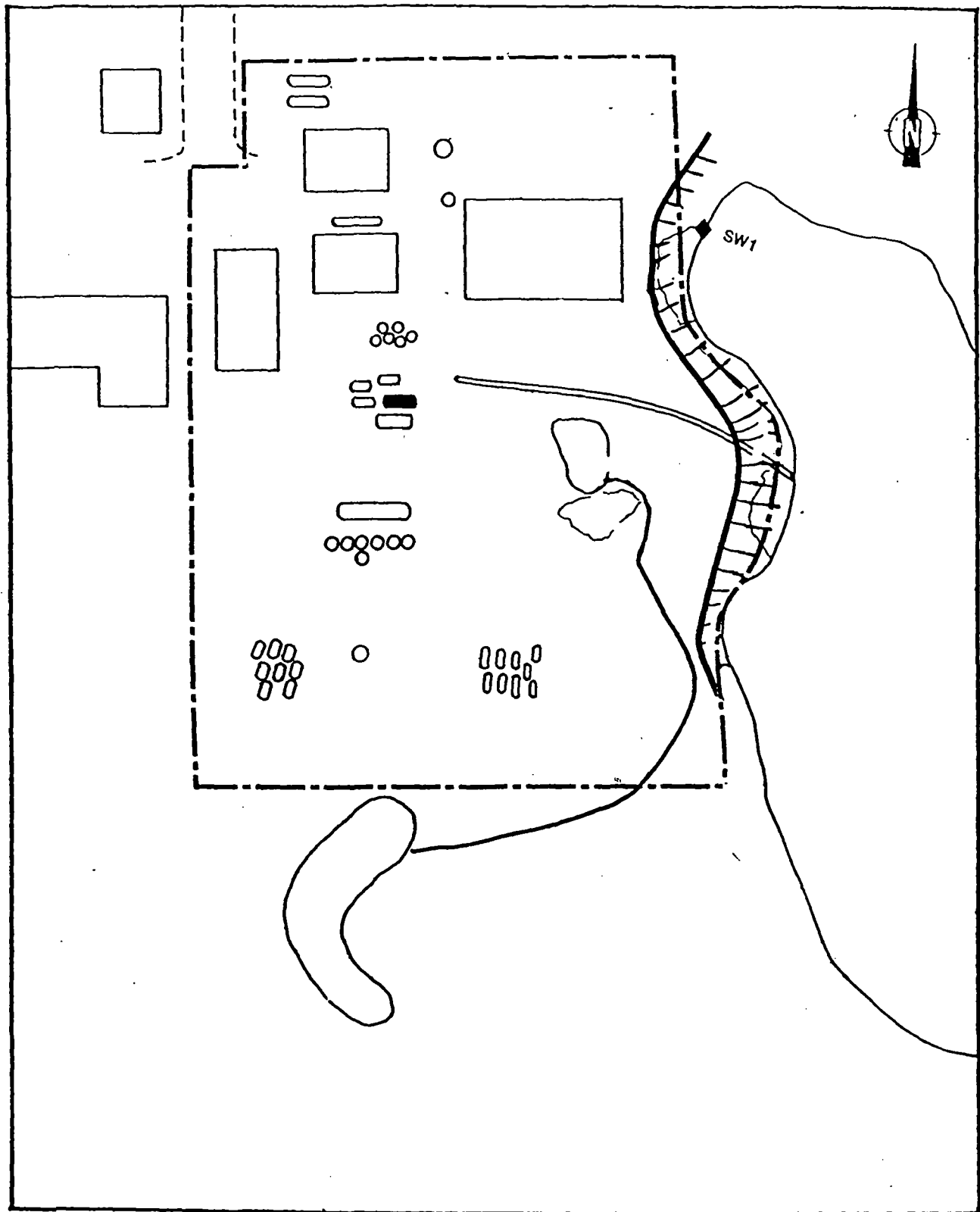
As directed by U.S. EPA, all soil samples were analyzed using the U.S. EPA Contract Laboratory Program (CLP) for TCL compounds by Cenref Laboratories of Brighton, Colorado, and for TAL analytes by Enseco/Rocky Mountain Analytical of Arvada, Colorado.

Surface Water Sampling Procedures. Surface water sample SW1 was collected off-site from the adjacent quarry lake to determine whether TCL compounds or TAL analytes had migrated from the site to the quarry lake (see Figure 3-4). FIT also collected a duplicate surface water sample at this location in accordance with U.S. EPA quality assurance/quality control (QA/QC) procedures. Sample SW1 was collected from the northwestern portion of the quarry lake. The sampling location for the



SOURCE: Ecology and Environment, Inc. 1990; BASE MAPS: USGS, Greenview, IL Quadrangle, 7.5 Minute Series, 1980; Athens, IL Quadrangle, 7.5 Minute Series, 1966, Photorevised 1976.

FIGURE 3-3 OFF-SITE SOIL SAMPLING LOCATION



SOURCE: Ecology and Environment, Inc. 1990.



FIGURE 3-4 SURFACE WATER SAMPLING LOCATION

surface water sample was approximately 25 feet from the top of the incline located at the rear of warehouse number two. A FIT team member collected sample SW1 and the duplicate by submerging a stainless steel ladle in the water and pouring the contents into sample bottles. The quarry lake water sample collected by FIT was an algae-green color.

Standard E & E procedures were adhered to during the collection of the surface water samples. The procedures included scrubbing the ladle with a solution of Alconox and distilled water, and triple-rinsing the ladle prior to the collection of each sample (E & E 1987). All surface water samples were packaged and shipped in accordance with U.S. EPA-required procedures. A blank surface water sample was also prepared, using distilled water, in accordance with U.S. EPA protocols.

As directed by U.S. EPA, the surface water samples were analyzed using the U.S. EPA CLP for TCL compounds by Cenref Laboratories of Brighton, Colorado, and for TAL analytes by Enseco/Rocky Mountain Analytical of Arvada, Colorado.

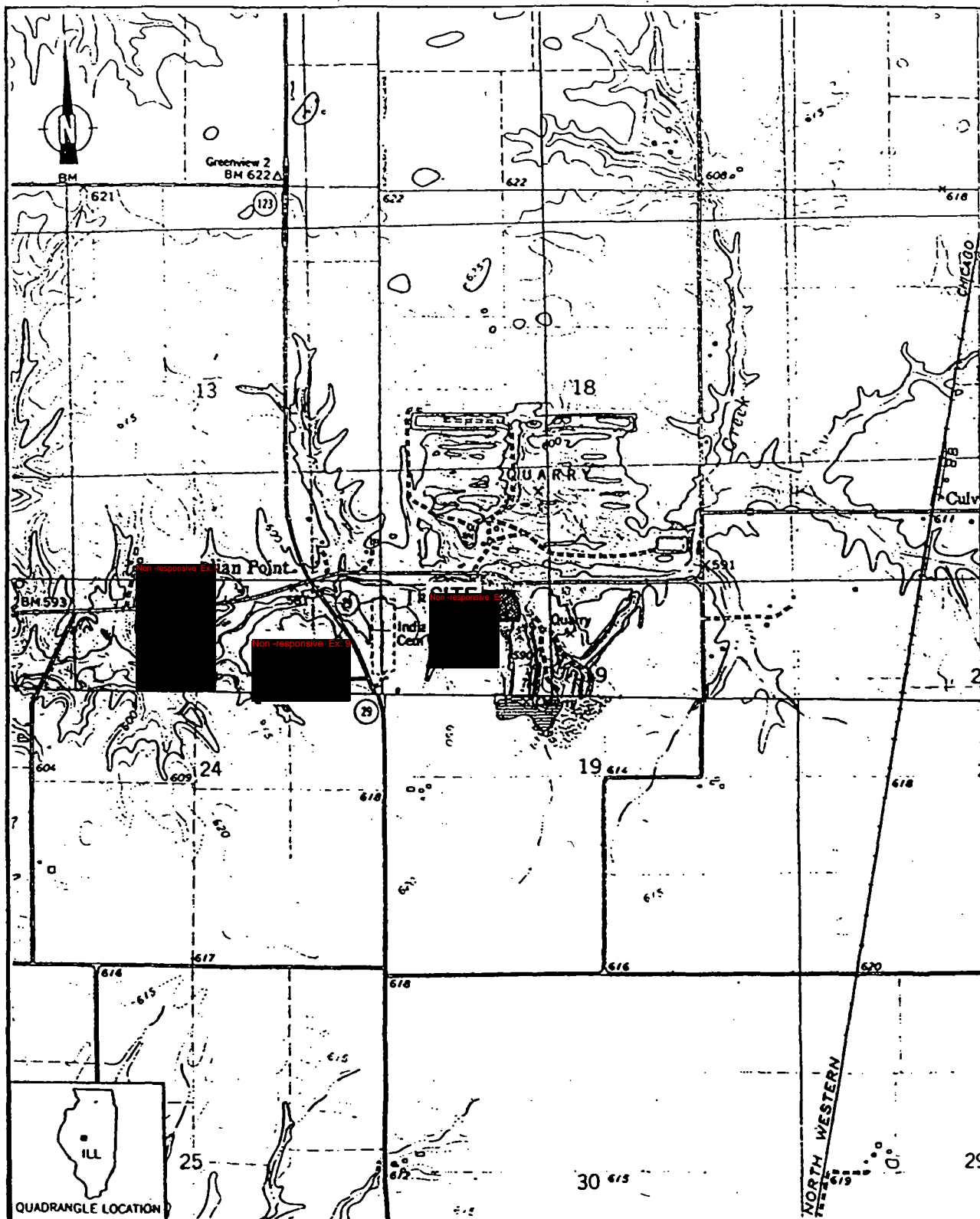
Residential Well Sampling Procedures. Four residential well samples (indicated as RW1, RW2, RW3, and RW4) and a duplicate were collected to determine whether TCL compounds or TAL analytes had migrated from the site to groundwater.

The residential well sampling locations were chosen because of their proximity to the site. In addition, the wells sampled were wells that FIT had been granted permission to sample.

Sample RW1 was collected at a residence located **Non-responsive Ex. 9**

[REDACTED]. Sample RW2 was collected from the PT & E facility, adjacent to the site. This groundwater well supplies drinking water to PT & E, Mapco, and the adjacent residence; PT & E owns the well. Residential well samples RW3 and RW4 were collected at residences **Non-responsive Ex.9** the Mapco site.

A duplicate residential well sample was collected in accordance with U.S. EPA QA/QC requirements. The duplicate sample was collected at location RW2. A blank residential well sample, using distilled water, was also prepared, in accordance with U.S. EPA protocols.



SOURCE: Ecology and Environment, Inc. 1990; BASE MAPS: USGS, Greenview, IL Quadrangle, 7.5 Minute Series, 1980; Athens, IL Quadrangle, 7.5 Minute Series, 1966, Photorevised 1976.

SCALE
0 1/2 1 MILE

FIGURE 3-5 RESIDENTIAL WELL SAMPLING LOCATIONS

TABLE 3-1

ADDRESSES OF RESIDENTIAL WELL SAMPLING LOCATIONS

Sample	Address
RW1	Non-responsive Ex. 9 [REDACTED] [REDACTED] (See log 5, Appendix E)
RW2 and Duplicate	Non-responsive Ex. 9 [REDACTED] [REDACTED]
RW3	Non-responsive Ex. 9 [REDACTED] [REDACTED]
RW4	Non-responsive Ex. 9 [REDACTED] [REDACTED] (See log 4, Appendix E)

Source: Ecology and Environment, Inc. 1990; Illinois Department of Public Health, Well Construction Reports.

All residential wells samples were obtained from outlets that bypassed water treatment systems and storage tanks. The water was allowed to discharge from the outlets for approximately 15 minutes before samples were collected to ensure that sample sources had been purged of standing water. All residential well samples were packaged and shipped in accordance with U.S. EPA-required procedures.

As directed by U.S. EPA, residential well samples were analyzed for TCL compounds using the U.S. EPA CLP by Hazelton Laboratories, Inc., of Madison, Wisconsin, and by U.S. EPA Central Regional Laboratory (CRL) of Chicago, Illinois, and for TAL analytes by JTC Environmental Consultants of Rockville, Maryland.

4. ANALYTICAL RESULTS

4.1 INTRODUCTION

This section presents results of the chemical analysis of FIT-collected soil samples, surface water samples, and residential well samples for TCL compounds and TAL analytes.

4.2 RESULTS OF CHEMICAL ANALYSIS OF FIT-COLLECTED SAMPLES

Soil Samples. Chemical analysis of FIT-collected soil samples revealed substances from the following groups of TCL compounds and TAL analytes: phenols, phthalates, halogenated aromatics, aromatics, polyaromatic hydrocarbons (PAHs), heavy metals, metals, pesticides, common laboratory artifacts, and common soil constituents; cyanide was also detected (see Table 4-1 for complete chemical analysis results of FIT-collected soil samples).

Surface Water Samples. Chemical analysis of FIT-collected surface water samples revealed substances from the following groups of TAL analytes: heavy metals and common soil constituents (see Table 4-2 for complete chemical analysis results of FIT-collected surface water samples).

Residential Well Samples. Chemical analysis of FIT-collected residential well samples revealed substances from the following groups of TCL compounds and TAL analytes: phthalates, metals, heavy metals, and common soil constituents (see Table 4-3 for complete chemical analysis results of FIT-collected residential well samples).

U.S. EPA quantitation/detection limits used in the analysis of soil, surface water, and residential well samples are provided in Appendix D.

Table 4-1
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED SOIL SAMPLES

Sample Collection Information and Parameters	<u>Sample Number</u>					
	S1	S2	S3	S4	S5	S6
Date	6/13/89	6/13/89	6/13/89	6/13/89	6/13/89	6/13/89
Time	1220	1245	1300	1345	1355	1435
CLP Organic Traffic Report Number	EFP00	EFP01	EFP02	EFP03	EFP04	EFP05
CLP Inorganic Traffic Report Number	MEED56	MEED57	MEED58	MEED59	MEED60	MEED61
<u>Compound Detected</u> (values in $\mu\text{g/kg}$)						
<u>Volatile Organics</u>						
toluene	9	—	31J	20J	—	37J
chlorobenzene	—	640	—	—	—	—
ethylbenzene	—	48	—	12J	—	—
<u>Semivolatile Organics</u>						
phenol	—	—	280J	—	—	—
naphthalene	—	100J	—	—	—	—
2-methylnaphthalene	—	290J	—	—	—	—
phenanthrene	—	230J	—	92J	—	—
pyrene	—	—	130J	—	—	—
bis(2-ethylhexyl)phthalate	—	210J	420J	230J	490J	—
<u>Pesticides/PCBs</u>						
Aldrin	—	—	1,100JC	—	120	—
Dieldrin	290	79	8,800C	33J	240	—
4,4'-DDT	40J	64	1,300J	60	51	—

Table 4-1 (Cont.)

Sample Collection Information and Parameters	Sample Number					
	S1	S2	S3	S4	S5	S6
<u>Analyte Detected</u> (values in mg/kg)						
aluminum	15,200	13,900	22,400	25,900	16,500	13,400
antimony	—	—	—	8.1JBN	—	—
arsenic	5.9	1.9JW	12.1	3.9JW	6.1S	8.8
barium	152	82.4	717	126	129	121
beryllium	0.79B	1.8	1.7	2.5	3.4	0.69B
cadmium	1.4	7.1	7.5	3	13.2	—
calcium	13,000	81,800	40,900	22,300	154,000	5,840
chromium	27	65.6	64.6	266	159	16.6
cobalt	12.2B	11.3B	12.8B	5.7B	7.1B	9.1
copper	36.1	19.8	260	19.9	20.7	22.7
iron	21,500	43,200	78,400	63,800	23,300	21,800
lead	18.7JN	12.3JN	1,250	17.2JsN	18.2J	40.4
magnesium	2,580	6,030	3,960	9,030	8,420	2,650
manganese	750	903	795	251	651	692
mercury	—	—	1.1	—	—	—
nickel	17.7	28.2	41.9	6.5B	25.5	20.9
potassium	3,970	24,600	8,900	98,900	10,800	1,770
selenium	—	—	2S	—	—	—
sodium	—	757B	844	—	—	—
thallium	—	—	—	1.4B	—	—
vanadium	40.8	119	47.7	246	119	32.4
zinc	86.9	407	1,220	91	330	120
cyanide	—	—	0.76	—	—	—

— Not Detected.

Table 4-1 (Cont.)

COMPOUND QUALIFIERS	DEFINITION	INTERPRETATION
J	Indicates an estimated value.	Compound value may be semiquantitative.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10 ng/ μ L in the final extract shall be confirmed by GC/MS.	Compound was confirmed by GC/MS and is quantitative. Use pesticide/PCB listed value.
ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
s	Analysis by Method of Standard Additions.	Value is quantitative.
N	Spike recoveries outside QC protocols, which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semiquantitative.
B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semiquantitative.
J	Value is above CRDL and is an estimated value because of a QC protocol.	Value may be semiquantitative.
W	Post-digestion spike for furnace AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semiquantitative.

Source: Ecology and Environment, Inc. 1990.

Table 4-2
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED SURFACE WATER SAMPLES

Sample Collection Information and Parameters	SW1	Sample Number	
		Duplicate	Blank
Date	6/13/89	6/13/89	6/13/89
Time	1130	1130	1055
CLP Organic Traffic Report Number	EFP11	EFP12	EFP13
CLP Inorganic Traffic Report Number	MEED67	MEED68	MEED69
Temperature (°C)	19	19	11
Specific Conductivity (μmhos/cm)	1,000	1,000	1
pH	9.50	9.50	7.33
<u>Analyte Detected</u>			
(values in μg/L)			
aluminum	57.1B	67.7	--
arsenic	9.7JBW	9.4JBW	--
barium	5.5B	5.4B	--
calcium	39,500	39,000	--
copper	13.9JB	12.1JB	9.3JB
iron	91.6B	79.8B	--
magnesium	42,000	41,600	--
potassium	180,000	178,000	--
sodium	8,920	9,270	--
vanadium	5.8B	5.2	--
zinc	12.8JB	6.9JB	8.9JB
cyanide	13.6	--	--

-- Not detected.

Table 4-2 (Cont.)

ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
J	Value is above CRDL and is an estimated value because of a QC protocol.	Value may be semiquantitative.
W	Post-digestion spike for furnace AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semiquantitative.

Source: Ecology and Environment, Inc. 1990.

Table 4-3
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED RESIDENTIAL WELL SAMPLES

Sample Collection Information and Parameters	Sample Number					
	RW1	RW2	Duplicate	RW3	RW4	Blank
Well Depth (Feet)	56	Not Known	NA	Not Known	41	NA
Date	6/13/89	6/13/89	6/13/89	6/13/89	6/13/89	6/13/89
Time	1100	1415	1145	1200	1415	1135
CLP Organic Traffic Report Number	EFP06	EFP07	EFP08	EFP09	EFP10	EFP14
CLP Inorganic Traffic Report Number	MEED62	MEED63	MEED64	MEED65	MEED66	MEED70
Temperature (°C)	11	10	11	6	10	13
Specific Conductivity (μmhos/cm)	500	900	400	500	900	0
pH	7.18	7.24	7.76	7.30	7.24	6.26
<u>Compound Detected</u>						
(values in μg/L)						
<u>Semivolatile Organics</u>						
diethylphthalate	—	—	—	—	0.4J	—
<u>Analyte Detected</u>						
(values in μg/L)						
aluminum	—	104J	—	—	—	88JB
antimony	—	7.8JN	—	—	—	—
barium	44.9B	83.5	83.8	64.2	26.6B	—
calcium	97,600	148,000	138,000	101,000	52,400	—
copper	—	—	—	—	15.1J*	—
lead	1.4JB	0.67JB	—	—	1.7JB	0.70JB
magnesium	47,000	78,700	72,600	53,200	27,000	—
manganese	7.8B	—	6.0B	6.2B	—	—
nickel	67.3J	55.1J	68J	83.7J	60.7J	25.6
potassium	594B	746B	670B	632B	518B	—
selenium	—	2.2J*	3.3J*	3.5J*	4.5J*	3.3*
silver	4.8JNB	—	25.4JN	—	—	—
sodium	11,400	13,600	12,600	9,710	4,720	—
zinc	55.6J*	—	—	—	222J*	—

NA Not applicable.

— Not detected.

Table 4-3 (Cont.)

COMPOUND QUALIFIER	DEFINITION	INTERPRETATION
J	Indicates an estimated value.	Compound value may be semiquantitative.

ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
N	Spike recoveries outside QC protocols, which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semiquantitative.
*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be quantitative or semiquantitative.
B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semiquantitative.
J	Value is above CRDL and is an estimated value because of a QC protocol.	Value may be semiquantitative.

Source: Ecology and Environment, Inc. 1990.

5. DISCUSSION OF MIGRATION PATHWAYS

5.1 INTRODUCTION

This section presents discussions of data and information pertaining to potential migration pathways and targets of TCL compounds and TAL analytes that are possibly attributable to the Mapco site.

The five migration pathways of concern discussed are groundwater, surface water, air, fire and explosion, and direct contact.

5.2 GROUNDWATER

TAL analytes were detected in groundwater on-site and approximately 3/4 miles from the site. The TAL analytes detected in the groundwater were also detected in on-site soil samples; however, these TAL analytes are considered to be common groundwater constituents. The TAL analytes detected in the residential well samples were metals, heavy metals, and common groundwater constituents.

A potential exists for TCL compounds and TAL analytes from the site to migrate to groundwater in the area. This potential is based on the following information.

- TCL compounds (McBeath 1987) and TAL analytes (Martin 1975) associated with agricultural product waste were detected in on-site soil samples.
- The compounds and analytes detected in on-site soil samples either were not detected in the background sample or were detected in on-site samples at higher concentrations than

in the background sample. Therefore, these TCL compounds and TAL analytes are attributable to the Mapco site.

- The on-site lagoon is unlined (Ingram 1989).
- Waste in the lagoon is sometimes allowed to seep into the ground (Ingram 1989).
- Mixing water (water and product chemicals) from the storage/mixing tanks was observed by FIT to be leaking onto the ground.
- The site does not have a leachate collection system.

The site and surrounding area are underlain by ground moraine and lenses of sand and gravel outwash from the Illinoian glaciation (Piskin and Bergstrom 1975). The depth to the Pennsylvanian-age bedrock is 15 to 60 feet. The bedrock is the Modesto Formation (Student et al. 1981). This formation has many vertical changes in rock types, with distinguishable layers of sandstone, shale, coal, underclay, and limestones; these rocks have relatively low permeabilities and porosities (Student et al. 1981). According to well logs of the area of the site reviewed by FIT, no wells obtained water from the bedrock. The uppermost layer of bedrock is limestone and is out-cropped at the quarry adjacent to the site.

The aquifer of concern (AOC) is the glacial drift. The drift is composed of mixed, discontinuous layers of sand, gravel, clay, and sandy clay (Piskin and Bergstrom 1975). Water is obtained from the sand, gravel, and sandy clay layers. The layers are probably interconnected and, according to area well logs, the depth to groundwater probably varies between 14 and 48 feet. The direction of groundwater flow is unknown, but based on surface drainage and regional geology, it is assumed to be east to west.

The only public water supply in the area is in Athens, Illinois, located approximately 2 miles south of the site. This system provides drinking water to persons within the city limits of Athens and in ad-

jacent subdivisions. The two city wells are located 2 miles west of Athens, beyond a 3-mile radius of the Mapco site (Hoffman 1988).

Using a house count (137) from United States Geological Survey (USGS) topographic maps of the area of the site (USGS 1966, 1966a, 1970, 1971) multiplied by a persons-per-household value of 2.74 (U.S. Bureau of the Census 1982), a population of approximately 380 persons was calculated to reside within a 3-mile radius of the site outside the corporate limits of the city of Athens, Illinois.

5.3 SURFACE WATER

Cyanide was detected in the surface water sample collected by FIT. Other TAL analytes detected in the surface water sample were common soil constituents. The cyanide detected in the surface water sample is possibly attributable to the Mapco site, based on the following information.

- Cyanide was detected in nine on-site soil samples.
- The site extends to the edge of the bank that leads to the quarry lake.
- Runoff channels that lead to the quarry lake are located behind warehouse number 2.

In addition, a potential exists for contaminants to migrate off-site via surface water, based on the following information.

- TAL analytes have been detected in the surface water sample.
- The steep slopes of the site are possible routes for surface water runoff.
- There are no surface water diversion structures present at the site.

- FIT observed leachate from the on-site lagoon flowing down one of the on-site slopes that leads to the quarry lake.

According to USGS topographic maps of the area of the site (USGS 1966, 1966a, 1970, 1971), there are no existing surface water routes between the Mapco site and any other body of surface water, other than the adjacent quarry lake, within a 3-mile radius of the site. According to Ingram, the adjacent quarry lake has possibly been used for fishing.

5.4 AIR

A release of potential contaminants to the air was not documented during the SSI of the Mapco site. During the reconnaissance inspection, FIT site-entry instruments (flame ionization detector [OVA 128], explosimeter, oxygen meter, hydrogen cyanide detector, and radiation monitor) did not detect levels above background concentrations at the site. In accordance with the U.S. EPA-approved work plan, further air monitoring was not conducted by FIT.

A potential exists for windblown particulates to carry TCL compounds and TAL analytes from the site. The potential is based on the following information.

- The area of the site consists of sandy, exposed soil.
- TCL compounds and TAL analytes were detected in on-site surface soil samples.
- FIT observed a pile of burned refuse located on-site.

The potential targets of air contamination include approximately 2,239 persons living within a 4-mile radius of the Mapco site. This population was calculated in the same manner described in 5.2.

5.5 FIRE AND EXPLOSION

During the FIT reconnaissance inspection, no evidence of fire or explosive conditions was observed. FIT explosimeter readings indicated

that no apparent potential for explosion existed at the site at the time of the SSI. However, evidence of the burning of waste at the site was observed by FIT.

5.6 DIRECT CONTACT

According to federal, state, and local file information reviewed by FIT, there is no documentation of an incident of direct contact with TCL compounds or TAL analytes at the Mapco site. However, according to Ingram, in 1985, a worker accidentally spilled anhydrous ammonia on himself.

A potential does exist for the public and workers at the site to come in direct contact with TCL compounds and TAL analytes detected at the site. The potential for direct contact is based on the following information.

- The site is unfenced and accessible.
- TCL compounds and TAL analytes have been detected in on-site soils.
- Waste in the on-site lagoon is pumped to an adjacent farm field.
- Some of the compounds used in making Mapco's fertilizer and pesticides are located in a storage building that does not have doors.
- Another commercial operation is located adjacent to the site.

Direct contact may occur through casual use of the unfenced site. The potential target population for direct contact with a 1-mile radius of the site is approximately 52 persons. This estimate was obtained by a house count (19) from USGS topographic maps (USGS 1966, 1966a, 1970, 1971) of the area of the site multiplied by a persons-per-household value of 2.74 (U.S. Bureau of the Census 1982).

6. REFERENCES

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USGS, 1966, Greenview, Illinois Quadrangle, 7.5 Minute Series:
1:24,000.

_____, 1966a, Athens, Illinois Quadrangle, 7.5 Minute Series:
1:24,000.

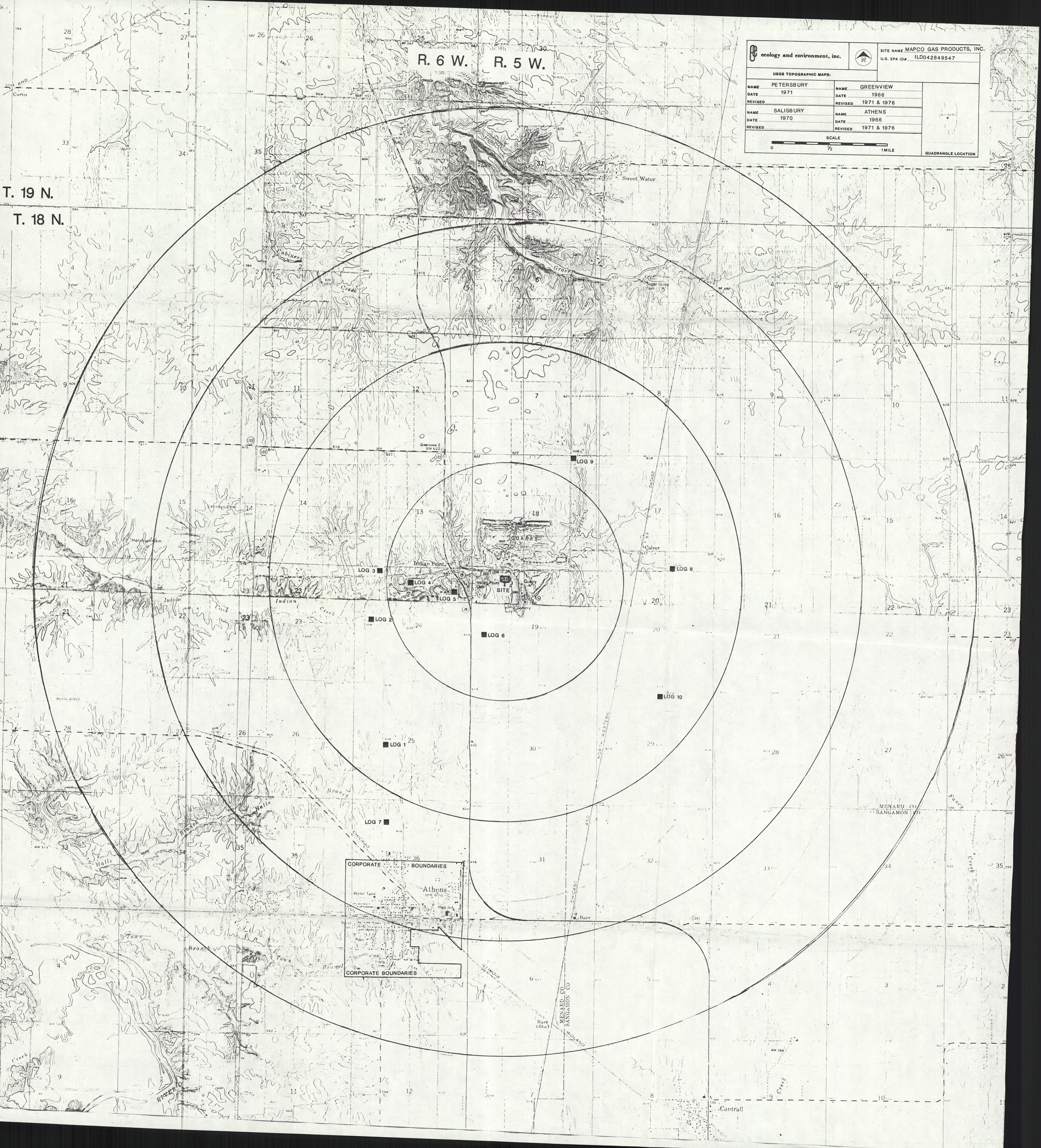
_____, 1970, Salisbury, Illinois Quadrangle, 7.5 Minute Series:
1:24,000.

_____, 1971, Petersburg, Illinois Quadrangle, 7.5 Minute Series:
1:24,000.

4121:rw

APPENDIX A

SITE 4-MILE RADIUS MAP



ecology and environment, inc.

SITE NAME MAPCO GAS PRODUCTS, INC.
U.S. EPA ID# ILD042849547

USGS TOPOGRAPHIC MAPS:

NAME PETERSBURY	NAME GREENVIEW
DATE 1971	DATE 1966
REVISED	REVISED 1971 & 1976
NAME SALISBURY	NAME ATHENS
DATE 1970	DATE 1966
REVISED	REVISED 1971 & 1976

SCALE
0 1/2 1 MILE

QUADRANGLE LOCATION

CORPORATE BOUNDARIES

Athens

CITY BOUNDARIES

APPENDIX B

U.S. EPA FORM 2070-13



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION
01 STATE IL 02 SITE NUMBER DO42849547

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) Mapco Gas Products, Inc.		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER Rural Route #2				
03 CITY Athens	04 STATE IL	05 ZIP CODE 62613	06 COUNTY Menard		07 COUNTY CODE 129	08 CONG DIST 18
09 COORDINATES LATITUDE 40 00 08.0 LONGITUDE 089 42 35.0		10 TYPE OF OWNERSHIP (Check one) <input checked="" type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input type="checkbox"/> F. OTHER <input type="checkbox"/> G. UNKNOWN				

III. INSPECTION INFORMATION

01 DATE OF INSPECTION 6, 13, 89 MONTH DAY YEAR	02 SITE STATUS <input checked="" type="checkbox"/> ACTIVE <input type="checkbox"/> INACTIVE	03 YEARS OF OPERATION 1955 Present BEGINNING YEAR ENDING YEAR	
04 AGENCY PERFORMING INSPECTION (Check all that apply) <input type="checkbox"/> A. EPA <input checked="" type="checkbox"/> B. EPA CONTRACTOR Ecology & Environment, Inc. (Name of firm) <input type="checkbox"/> C. MUNICIPAL <input type="checkbox"/> D. MUNICIPAL CONTRACTOR (Name of firm) <input type="checkbox"/> E. STATE <input type="checkbox"/> F. STATE CONTRACTOR (Name of firm) <input type="checkbox"/> G. OTHER (Specify)			

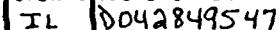
05 CHIEF INSPECTOR Ronnie Galmore	06 TITLE Environmental Technician	07 ORGANIZATION Ecology & Environment, Inc.	08 TELEPHONE NO. (312) 663-9415
09 OTHER INSPECTORS Deborah Barrett	10 TITLE Geologist	11 ORGANIZATION " "	12 TELEPHONE NO. () "
Don Sullivan	Chemical Engineer	" "	() "
Kurt Sims	Earth Scientist	" "	() "
Mike Phillips	Geologist	" "	() "
			()

13 SITE REPRESENTATIVES INTERVIEWED Mike Ingram	14 TITLE Plant Manager	15 ADDRESS Rural Route #2	16 TELEPHONE NO. (217) 636-8274
			()
			()
			()
			()
			()
			()

17 ACCESS GAINED BY (Check one) <input checked="" type="checkbox"/> PERMISSION <input type="checkbox"/> WARRANT	18 TIME OF INSPECTION 0900	19 WEATHER CONDITIONS 65°F Wind 5-10 mph From the Southwest
---	-------------------------------	--

IV. INFORMATION AVAILABLE FROM

01 CONTACT Thomas Crause	02 OF Agency Organization IEPA Springfield, IL.		03 TELEPHONE NO. (217) 782-9848
04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM Ronnie Galmore	05 AGENCY USEPA	06 ORGANIZATION Ecology & Environment, Inc.	07 TELEPHONE NO. (312) 663-9415
08 DATE MONTH DAY YEAR			

[illegible]

EPA FORM 2070-13(7-81)



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

L IDENTIFICATION

01 STATE 02 SITE NUMBER
IL 1042849547

I. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION

03 POPULATION POTENTIALLY AFFECTED: 380

02 ☐ OBSERVED (DATE: _____)

04 NARRATIVE DESCRIPTION

☒ POTENTIAL

☐ ALLEGED

See Section 5.2 of SSI

01 ☒ B. SURFACE WATER CONTAMINATION

03 POPULATION POTENTIALLY AFFECTED: 0

02 ☐ OBSERVED (DATE: _____)

04 NARRATIVE DESCRIPTION

☒ POTENTIAL

☐ ALLEGED

See Section 5.3 of SSI

01 ☒ C. CONTAMINATION OF AIR

03 POPULATION POTENTIALLY AFFECTED: 2239

02 ☐ OBSERVED (DATE: _____)

04 NARRATIVE DESCRIPTION

☒ POTENTIAL

☐ ALLEGED

See Section 5.4 of SSI

01 ☒ D. FIRE/EXPLOSIVE CONDITIONS

03 POPULATION POTENTIALLY AFFECTED: _____

02 ☐ OBSERVED (DATE: _____)

04 NARRATIVE DESCRIPTION

☐ POTENTIAL

☐ ALLEGED

See Section 5.5 of SSI

01 ☒ E. DIRECT CONTACT

03 POPULATION POTENTIALLY AFFECTED: 52

02 ☐ OBSERVED (DATE: _____)

04 NARRATIVE DESCRIPTION

☒ POTENTIAL

☐ ALLEGED

See Section 5.6 of SSI

01 ☒ F. CONTAMINATION OF SOIL

03 AREA POTENTIALLY AFFECTED: ~5 Acres

02 ☒ OBSERVED (DATE: 6-13-89)

04 NARRATIVE DESCRIPTION

☒ POTENTIAL

☐ ALLEGED

TCL compounds and TAL analytes were detected in soil samples collected on site.
See Section 4.2 for results of chemical analyses of all FIT-collected samples.

01 ☒ G. DRINKING WATER CONTAMINATION

03 POPULATION POTENTIALLY AFFECTED: 380

02 ☐ OBSERVED (DATE: _____)

04 NARRATIVE DESCRIPTION

☒ POTENTIAL

☐ ALLEGED

TCL compounds and TAL analytes detected in the soil samples could potentially contaminate groundwater surrounding the site, which is used for drinking water.

01 ☐ H. WORKER EXPOSURE/INJURY

03 WORKERS POTENTIALLY AFFECTED: 6

02 ☐ OBSERVED (DATE: _____)

04 NARRATIVE DESCRIPTION

☒ POTENTIAL

☐ ALLEGED

There is a potential for worker exposure/injury because soil samples taken on-site show contamination with TCL compounds and TAL analytes.
In 1985, a worker accidentally spilled some anhydrous ammonia onto himself.

01 ☒ I. POPULATION EXPOSURE/INJURY

03 POPULATION POTENTIALLY AFFECTED: 2239

02 ☐ OBSERVED (DATE: _____)

04 NARRATIVE DESCRIPTION

☒ POTENTIAL

☐ ALLEGED

See sections A, B, C, D, E, and H, above



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE OF SITE NUMBER
IL 0042849547

II. HAZARDOUS CONDITIONS AND INCIDENTS *(continued)*

01 ☒ J. DAMAGE TO FLORA 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION Damage to flora could potentially occur through contact with contaminated soil, potentially contaminated air and water resources.

01 ☒ K. DAMAGE TO FAUNA 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION *(include number(s) of species)*
See J, above

01 ☒ L. CONTAMINATION OF FOOD CHAIN 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION Waste from the on-site holding lagoon is pumped to an adjacent farm field. Contaminants could potentially affect the food crop through windblown contaminated soil. See J, above.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
(Leaking Tanks/Storage Vessels, Leaking Drums)
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
See Section 3.3 of SSI

01 ☒ N. DAMAGE TO OFFSITE PROPERTY 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
See J and L above.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPL 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
N/A

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
See Sections 2.3 and 3.3 of SSI.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

See Section 3.3 of SSI

III. TOTAL POPULATION POTENTIALLY AFFECTED: 2239

IV. COMMENTS

The site is an active agricultural product dealer which sells, mixes and applies fertilizers, Pesticides and herbicides. The facility also sells propane gas.

V. SOURCES OF INFORMATION *(cite specific references, e.g., state files, sample analysis, reports)*

State and F1T files, Region V
SSI conducted on 6-13-89



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	DD42849547

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
<input type="checkbox"/> A. NPDES				
<input type="checkbox"/> B. UIC				
<input type="checkbox"/> C. AIR				
<input type="checkbox"/> D. RCRA				
<input type="checkbox"/> E. RCRA INTERIM STATUS				
<input type="checkbox"/> F. SPCC PLAN				
<input checked="" type="checkbox"/> G. STATE (Specify)	1984-EA-0277	4-12-84	4-1-85	
<input type="checkbox"/> H. LOCAL (Specify)				
<input type="checkbox"/> I. OTHER (Specify)				
<input type="checkbox"/> J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE	04 TREATMENT (Check all that apply)	05 OTHER
<input type="checkbox"/> A. SURFACE IMPOUNDMENT			<input type="checkbox"/> A. INCINERATION	<input checked="" type="checkbox"/> A. BUILDINGS ON SITE
<input type="checkbox"/> B. PILES			<input type="checkbox"/> B. UNDERGROUND INJECTION	
<input type="checkbox"/> C. DRUMS, ABOVE GROUND			<input type="checkbox"/> C. CHEMICAL/PHYSICAL	
<input type="checkbox"/> D. TANK, ABOVE GROUND			<input type="checkbox"/> D. BIOLOGICAL	
<input type="checkbox"/> E. TANK, BELOW GROUND			<input type="checkbox"/> E. WASTE OIL PROCESSING	
<input type="checkbox"/> F. LANDFILL			<input type="checkbox"/> F. SOLVENT RECOVERY	06 AREA OF SITE
<input type="checkbox"/> G. LANDFARM			<input type="checkbox"/> G. OTHER RECYCLING/RECOVERY	~ 5 Acres
<input type="checkbox"/> H. OPEN DUMP			<input type="checkbox"/> H. OTHER (Specify)	
<input checked="" type="checkbox"/> I. OTHER Lagoon (Specify)	unknown		None	

07 COMMENTS

See Section 2.3 of SSI

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)
<input type="checkbox"/> A. ADEQUATE, SECURE <input type="checkbox"/> B. MODERATE <input checked="" type="checkbox"/> C. INADEQUATE, POOR <input type="checkbox"/> D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DRUMS, LINERS, BARRIERS, ETC.

The on-site lagoon is unlined. The waste in the lagoon is permitted to seep into the ground. Some of the areas around the storage tanks are wet and discolored.
See Section 3.3 of SSI.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO

02 COMMENTS The entire site is unfenced.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis reports)

SSI conducted on 6-13-89
State and FIT file information.
Region II



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE IL 02 SITE NUMBER 0042849547

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY
(Check as applicable)

SURFACE WELL
COMMUNITY A ☐ B ☒
NON-COMMUNITY C ☐ D ☒

02 STATUS

ENDANGERED AFFECTED MONITORED
A ☐ B ☐ C ☒
D ☐ E ☐ F ☐

03 DISTANCE TO SITE

A 73 ft
B adjacent ft

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☒ A ONLY SOURCE FOR DRINKING ☐ B DRINKING (Other sources available)
COMMERCIAL INDUSTRIAL IRRIGATION (For other use or source as available)
☐ C COMMERCIAL INDUSTRIAL IRRIGATION ☐ D NOT USED, UNUSABLE

02 POPULATION SERVED BY GROUND WATER

380

03 DISTANCE TO NEAREST DRINKING WATER WELL on-site ft

04 DEPTH TO GROUNDWATER

~ 14 - 48 ft

05 DIRECTION OF GROUNDWATER FLOW

assumed East to West

06 DEPTH TO AQUIFER OF CONCERN

ft

07 POTENTIAL YIELD OF AQUIFER

UNKNOWN (gpd)

08 SOLE SOURCE AQUIFER

☒ YES ☐ NO
unknown

09 DESCRIPTION OF WELLS (including usage, depth, and location relative to population and buildings) Everyone within the three mile radius of the site is on groundwater. Water is obtained from the sand, gravel and sandy clay layers. The city of Athens groundwater wells are located outside of the three mile radius of the site.

10 RECHARGE AREA

☒ YES ☐ NO
COMMENTS Recharged directly by seepage through precipitation

11 DISCHARGE AREA

☐ YES ☐ NO
COMMENTS unknown

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:

AFFECTED

DISTANCE TO SITE

no name lake quarry ☐ adjacent ft
☐
☐

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE

A 52
NO OF PERSONS

TWO (2) MILES OF SITE

B 131
NO OF PERSONS

THREE (3) MILES OF SITE

C 1180
NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION

adjacent ft

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE

48

04 DISTANCE TO NEAREST OFF-SITE BUILDING

adjacent ft

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural village, densely populated urban area)

The population of the area surrounding the Mapco site is rural and sparsely populated.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

IL D042849547

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-8} - 10^{-9}$ cm/sec ☒ B. $10^{-4} - 10^{-8}$ cm/sec ☐ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE
(Less than 10^{-8} cm/sec)
☐ B. RELATIVELY IMPERMEABLE
($10^{-4} - 10^{-8}$ cm/sec)
☒ C. RELATIVELY PERMEABLE
($10^{-2} - 10^{-4}$ cm/sec)
☐ D. VERY PERMEABLE
(Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK

~ 15 - 60 (ft)

04 DEPTH OF CONTAMINATED SOIL ZONE

unknown (ft)

05 SOIL pH

unknown

06 NET PRECIPITATION

1 (in)

07 ONE YEAR 24 HOUR RAINFALL

2.3 (in)

08 SLOPE

SITE SLOPE

35 %

DIRECTION OF SITE SLOPE

East

TERRAIN AVERAGE SLOPE

~ .3 %

09 FLOOD POTENTIAL

SITE IS IN NA YEAR FLOODPLAIN

10

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

None

11 DISTANCE TO WETLANDS (if acre determined)

ESTUARINE

OTHER

A NA (mi)

B NA (mi)

12 DISTANCE TO CRITICAL HABITAT (if endangered species)

(mi)

ENDANGERED SPECIES: none listed

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL

RESIDENTIAL AREAS, NATIONAL/STATE PARKS,
FORESTS, OR WILDLIFE RESERVES

AGRICULTURAL LANDS
PRIME AG LAND AG LAND

a adjacent (mi)

b adjacent (mi)

c NA (mi) d adjacent (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

See Appendix A

VII. SOURCES OF INFORMATION (cite specific references, e.g., State files, sample analyses, reports)

Climatic Atlas of the United States

USGS topographic map of Athens, Greenville, Salisbury, Petersburg

SSI/FIT 6-13-89

State File Information.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE IL 02 SITE NUMBER D042849547

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	4	TAL JTC Environmental Consultants Analytes: Rockville, MD BNA Hazleton Labs, Inc. Pest/PCB: Madison, WI. VOA's: U.S. EPA Central Regional Lab Region II Chicago, IL	Available
Surface water	1	TAL Ensco/Rocky Mountain Analytical Analytes: Arvado, CO. TCL Cenref Labs Compounds: Brighton, CO	Available
soil	6	TAL Ensco/Rocky Mountain Analytical Analytes: Arvado, CO TCL Cenref Labs Compounds: Brighton, CO	Available

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Draeger Pump	No color change
Radiation Mini-Alert	No reading above background
Explosimeter	No reading above background
Oxygen Meter	No reading above background
DVA-128	No readings above background

IV. PHOTOGRAPHS AND MAPS

01 TYPE <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> AERIAL	02 IN CUSTODY OF Ecology & Environment, Inc., Chicago <small>(Name of organization or individual)</small>
03 MAPS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	04 LOCATION OF MAPS Ecology & Environment, Inc. Chicago

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

Temperature, conductive, and PH, For Residential Wells and Surface water.

	RW1/MSD	RW2/DUP	RW3	RW4	Blank for RW	SW1	Blank for SW
T°	11° C	10° C	11° C	6° C	13° C	19° C	11° C
PH	7.18	7.24	7.76	7.30	6.26	9.50	7.33
Conductivity	500 mhos	900 mhos	400 mhos	500 mhos	Ø mhos	1000 mhos	1 mhos

VI. SOURCES OF INFORMATION (Cite specific references e.g., State Gov. Sample analysis, reports)

Ecology & Environment, Inc. File Information Region II
SSI conducted June 13, 1989



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

IDENTIFICATION

01 STATE 02 SITE NUMBER
IL D042849547

II. CURRENT OWNER(S)				PARENT COMPANY (if applicable)			
01 NAME Mapro Gas Products, Inc		02 D+B NUMBER		06 NAME Mapro Gas Products, Inc		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD, etc.) Rural Route #2		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD, etc.) P.O. Box 21628		11 SIC CODE	
05 CITY Athens		06 STATE IL	07 ZIP CODE 62613	12 CITY Tulsa		13 STATE OK	14 ZIP CODE 74121
01 NAME		02 D+B NUMBER		06 NAME		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD, etc.)		11 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER		06 NAME		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD, etc.)		11 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER		06 NAME		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD, etc.)		11 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER		06 NAME		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD, etc.)		11 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
III. PREVIOUS OWNER(S) (Last must record first)				IV. REALTY OWNER(S) (if applicable, last must record first)			
01 NAME Loren E. Hopwood		02 D+B NUMBER		01 NAME		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD, etc.) unknown		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD, etc.)		04 SIC CODE	
05 CITY Athens		06 STATE IL	07 ZIP CODE 62613	05 CITY		06 STATE	07 ZIP CODE
01 NAME Kennedy Kincaid		02 D+B NUMBER		01 NAME		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD, etc.) unknown		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD, etc.)		04 SIC CODE	
05 CITY Athens		06 STATE IL	07 ZIP CODE 62613	05 CITY		06 STATE	07 ZIP CODE
01 NAME		02 D+B NUMBER		01 NAME		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD, etc.)		04 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	05 CITY		06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (cite specific references, e.g., state files, company records, reports)

SSI conducted on June 13, 1989
state file and FIT file Region IV



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

L IDENTIFICATION

01 STATE 02 SITE NUMBER
IL D042849547

II. CURRENT OPERATOR (Provide if different from owner)				OPERATOR'S PARENT COMPANY (if applicable)			
01 NAME Mapco Gas Products, Inc.		02 D+B NUMBER		10 NAME Mapco Gas Products, Inc.		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.) Rural Route #2		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.) P.O. Box 21628		13 SIC CODE	
05 CITY Athens		06 STATE IL	07 ZIP CODE 62613	14 CITY Tulsa		15 STATE OK	16 ZIP CODE 74121
08 YEARS OF OPERATION 21		09 NAME OF OWNER Mapco Gas Products, Inc.					
III. PREVIOUS OPERATOR(S) (List most recent first, provide only if different from owner)				PREVIOUS OPERATORS' PARENT COMPANIES (if applicable)			
01 NAME Loren E. Hopwood		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.) unknown		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY Athens		06 STATE IL	07 ZIP CODE 62613	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION 13		09 NAME OF OWNER DURING THIS PERIOD Same					
01 NAME Kennedy Kincaid		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.) unknown		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY Athens		06 STATE IL	07 ZIP CODE 62613	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION 13		09 NAME OF OWNER DURING THIS PERIOD Same					
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

SSI conducted on June 13, 1989
FIT and State files, Region IV



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D042849547

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
Mapco Gas Products, Inc	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
Rural Route #2	
05 CITY	06 STATE 07 ZIP CODE
Athens	IL 62613

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
unknown			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
None			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE

V. SOURCES OF INFORMATION (List specific references, e.g., state files, sample analysis, reports)

SSI conducted on 6/13/89
FIT and State files, Region V



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

L IDENTIFICATION

01 STATE 02 SITE NUMBER
IL D0428495-47

L PAST RESPONSE ACTIVITIES

01 <input type="checkbox"/> A. WATER SUPPLY CLOSED 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> B. TEMPORARY WATER SUPPLY PROVIDED 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> C. PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> D. SPILLED MATERIAL REMOVED 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> F. WASTE REPACKAGED 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> G. WASTE DISPOSED ELSEWHERE 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> H. ON SITE BURIAL 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> L. ENCAPSULATION 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> N. CUTOFF WALLS 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> O. EMERGENCY DIKING/SURFACE WATER DIVERSION 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> P. CUTOFF TRENCHES/SUMP 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

L IDENTIFICATION
01 STATE IL 02 SITE NUMBER
D042849547

II PAST RESPONSE ACTIVITIES *Completed*

01 <input type="checkbox"/> R. BARRIER WALLS CONSTRUCTED 04 DESCRIPTION	<u>N/A</u>	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> S. CAPPING/COVERING 04 DESCRIPTION	<u>N/A</u>	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> T. BULK TANKAGE REPAIRED 04 DESCRIPTION	<u>N/A</u>	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> U. GROUT CURTAIN CONSTRUCTED 04 DESCRIPTION	<u>N/A</u>	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> V. BOTTOM SEALED 04 DESCRIPTION	<u>N/A</u>	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> W. GAS CONTROL 04 DESCRIPTION	<u>N/A</u>	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> X. FIRE CONTROL 04 DESCRIPTION	<u>N/A</u>	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> Y. LEACHATE TREATMENT 04 DESCRIPTION	<u>N/A</u>	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> Z. AREA EVACUATED 04 DESCRIPTION	<u>N/A</u>	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> 1. ACCESS TO SITE RESTRICTED 04 DESCRIPTION	<u>N/A</u>	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> 2. POPULATION RELOCATED 04 DESCRIPTION	<u>N/A</u>	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> 3. OTHER REMEDIAL ACTIVITIES 04 DESCRIPTION	<u>None</u>	02 DATE _____	03 AGENCY _____

III SOURCES OF INFORMATION *(For specific references, e.g., state files, sample analysis, reports)*

State and FIT files, Region V



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
IL 0042849547

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

In 1980, Mapco built an unlined on-site temporary holding lagoon without a permit. The waste in the lagoon is permitted to seep into the ground or is pumped to an adjacent farm field when the lagoon is full.

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT files and State files, Region II
SSI conducted on 6/13/89

APPENDIX C

FIT SITE PHOTOGRAPHS

U.S. EPA ID: ILD042849547

TDD: F05-8810-017

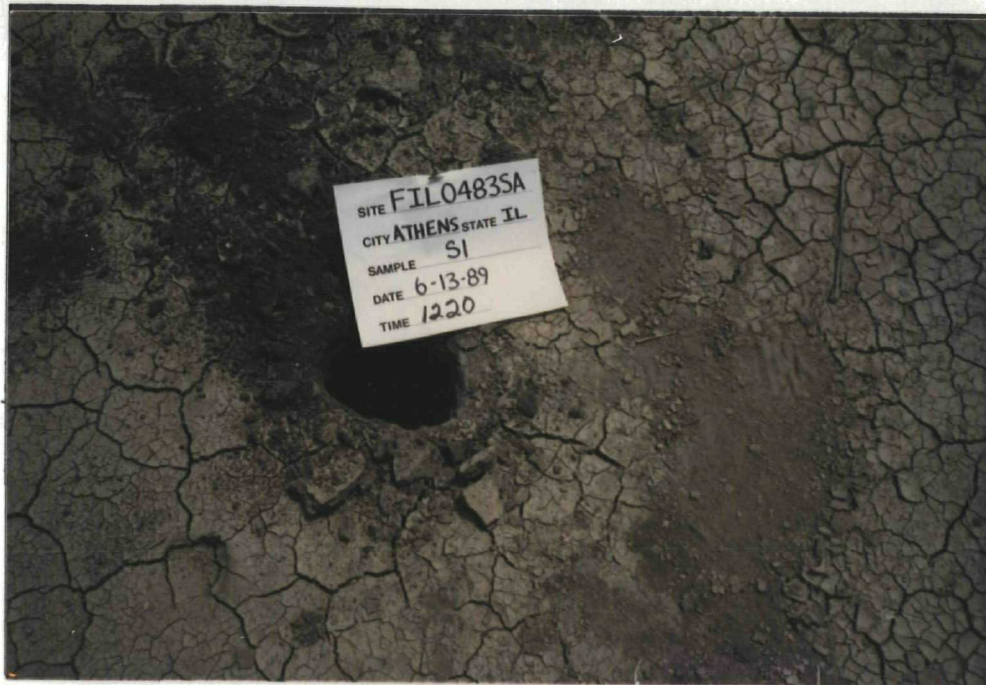
PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1220

DIRECTION OF
PHOTOGRAPH:SouthWEATHER
CONDITIONS:SUNNY, 65° F.

PHOTOGRAPHED BY:

Ronnie GalmoreSAMPLE ID
(if applicable):SIDESCRIPTION: Close up of soil Sample SI

DATE: JUNE 13, 1989

TIME: 1220

DIRECTION OF
PHOTOGRAPH: SouthWEATHER
CONDITIONS: SUNNY, 65° F.PHOTOGRAPHED BY: Ronnie GalmoreSAMPLE ID
(if applicable): SIDESCRIPTION: Soil Sample SIis locate near a farm
field where lagoan's water
is pumped. Perspective of
SI.

SITE NAME: MAPCO GAS PRODUCTS, INC.

PAGE 2 OF 28

U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1245

DIRECTION OF
PHOTOGRAPH:

North

WEATHER
CONDITIONS:

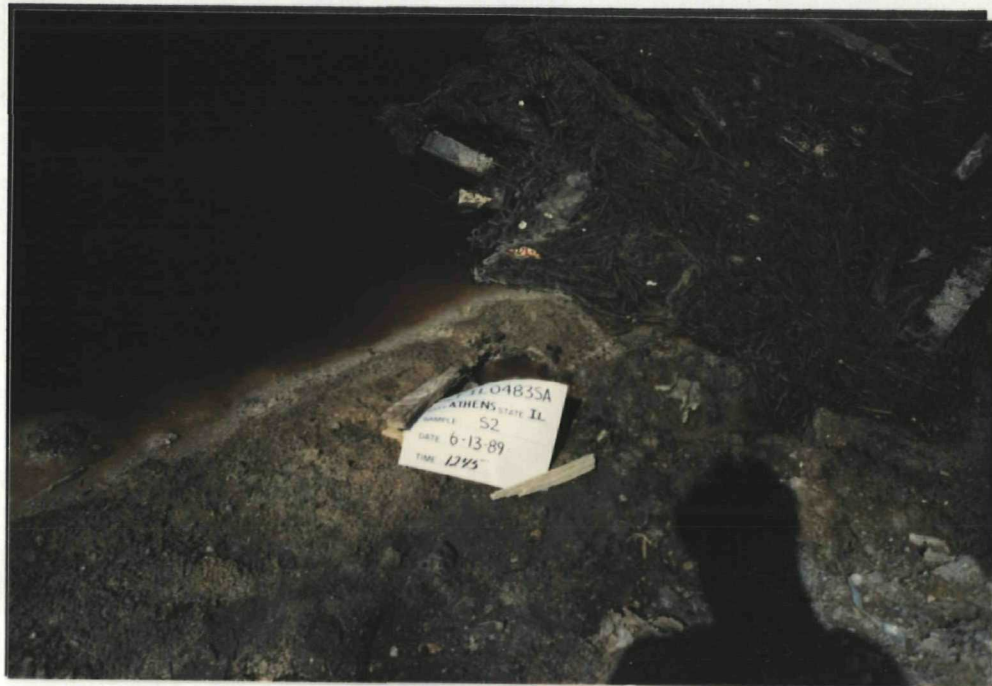
SUNNY, 65° F.

PHOTOGRAPHED BY:

Deborah Barrett

SAMPLE ID
(if applicable):

52



DESCRIPTION: Close up of Soil Sample S2

DATE: JUNE 13, 1989

TIME: 1245

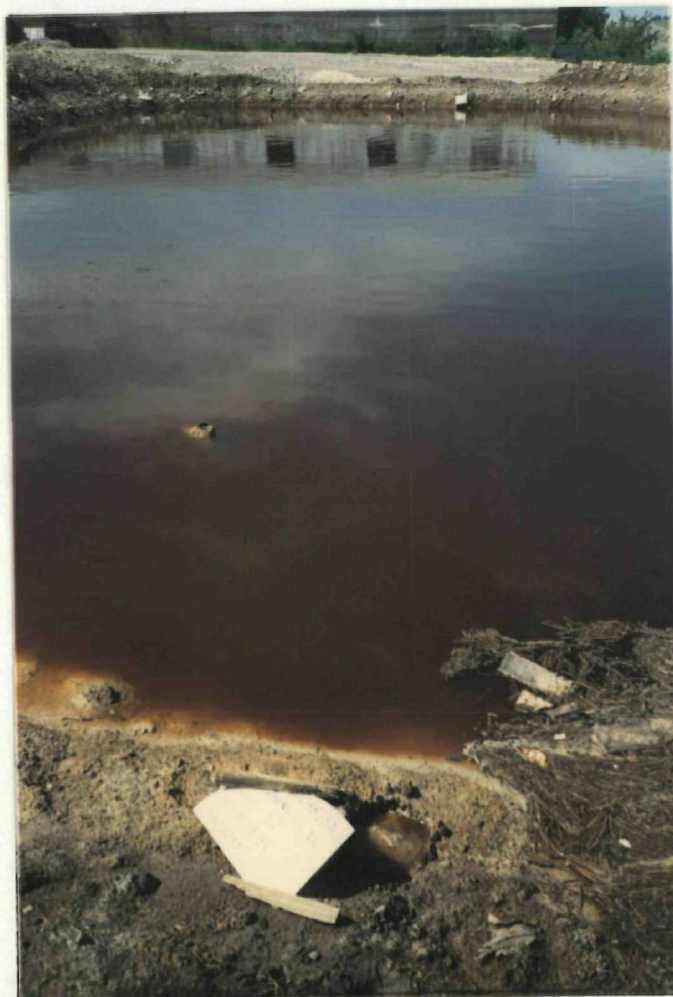
DIRECTION OF
PHOTOGRAPH: North

WEATHER
CONDITIONS: SUNNY, 65° F.

PHOTOGRAPHED BY: Deborah Barrett

SAMPLE ID
(if applicable): S2 is located

DESCRIPTION: at the edge
of the lagoon. The sample
was taken from the south end
of the one site lagoon.



FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: MAPCO GAS PRODUCTS, INC.

PAGE 3 OF 28

U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1300

DIRECTION OF PHOTOGRAPH:

NA

WEATHER CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
DEBORAH BARRETT

SAMPLE ID
(if applicable):
S3



DESCRIPTION: Close up of soil Sample S3

DATE: JUNE 13, 1989

TIME: 1300

DIRECTION OF PHOTOGRAPH:

East

WEATHER CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
DEBORAH BARRETT

SAMPLE ID
(if applicable):
S3



DESCRIPTION: Soil Sample S3 was collected from a runoff channel located behind the dry pesticide building that leads to the quarry.

SITE NAME: MAPCO GAS PRODUCTS, INC.

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U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1345

DIRECTION OF
PHOTOGRAPH:
South-South East

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
Deb Barrett

SAMPLE ID
(if applicable):
S4



DESCRIPTION: close up of Soil sample S4.

DATE: JUNE 13, 1989

TIME: 1345

DIRECTION OF
PHOTOGRAPH: East

WEATHER
CONDITIONS: SUNNY, 65° F.

PHOTOGRAPHED BY: Deb Barrett

SAMPLE ID
(if applicable): Sample S4

DESCRIPTION: is located near
the old storage tanks that
are no longer used. The
tanks are located at the
south east section of the
site.



SITE NAME:

MAPCO GAS PRODUCTS, INC.

PAGE 5 OF 28

U.S. EPA ID:

ILD042849547

TDD:

F05-8810-017

PAN:

FIL0483SB

DATE: JUNE 13, 1989

TIME: 1355

DIRECTION OF
PHOTOGRAPH:

South East

WEATHER

CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:

Deb Barrett

SAMPLE ID

(if applicable):

S5



DESCRIPTION: Close up of S5

DATE: JUNE 13, 1989

TIME: 1355

DIRECTION OF

PHOTOGRAPH: South-East

WEATHER

CONDITIONS: SUNNY, 65° F.

PHOTOGRAPHED BY: Deb Barrett

SAMPLE ID

(if applicable): Soil Sample

DESCRIPTION: S5 was collected
near a pile of refuse that is
located south east of the onsite
lagoon.



SITE NAME: MAPCO GAS PRODUCTS, INC.

PAGE 6 OF 28

U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FILO483SB

DATE: JUNE 13, 1989

TIME: 1435

DIRECTION OF
PHOTOGRAPH:

East

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
KURT SIMSSAMPLE ID
(if applicable):
S6

DESCRIPTION: Close up of S6



DATE: JUNE 13, 1989

TIME: 1435

DIRECTION OF
PHOTOGRAPH:

North East

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
KURT SIMSSAMPLE ID
(if applicable):
S6DESCRIPTION: Perspective of S6, the potential background soil
sample.

U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1130

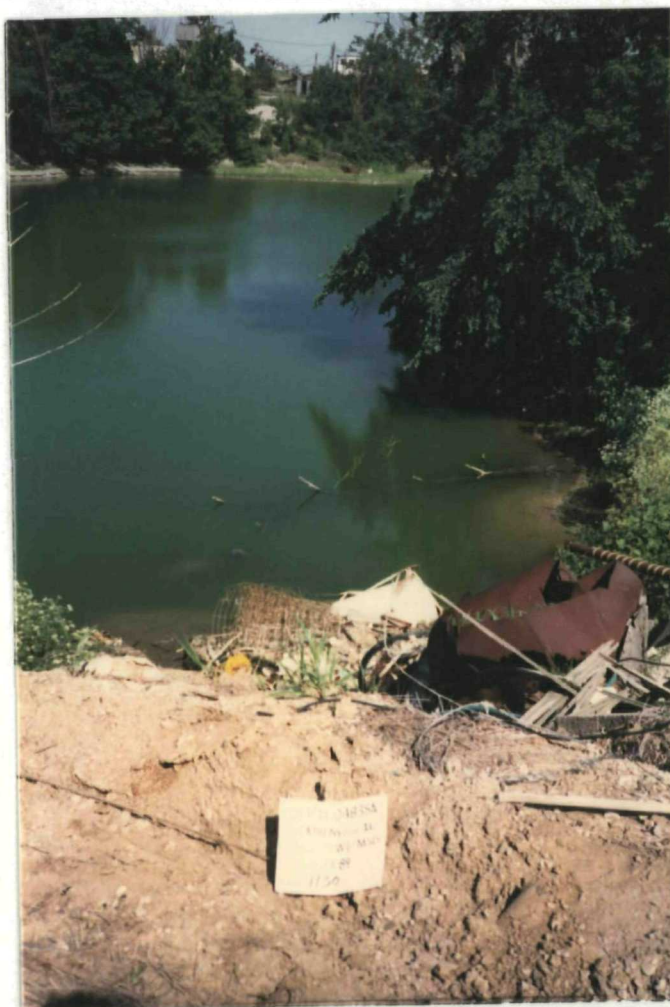
DIRECTION OF
PHOTOGRAPH:EastWEATHER
CONDITIONS:SUNNY, 65° F.

PHOTOGRAPHED BY:

Ronnie GalmareSAMPLE ID
(if applicable):SW1DESCRIPTION: Surface water sample SW1, a close up picture.

DATE: JUNE 13, 1989

TIME: 1130

DIRECTION OF
PHOTOGRAPH: EastWEATHER
CONDITIONS: SUNNY, 65° F.PHOTOGRAPHED BY: Ronnie GalmareSAMPLE ID
(if applicable): SW1DESCRIPTION: Perspective photo
of SW1. Taken from the
quarry

SITE NAME: MAPCO GAS PRODUCTS, INC.

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U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1200

DIRECTION OF
PHOTOGRAPH:

West

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
KURT SIMSSAMPLE ID
(if applicable):
RW4

DESCRIPTION: close up of residential well sample RW4.

DATE: JUNE 13, 1989

TIME: 1200

DIRECTION OF
PHOTOGRAPH:

South West

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
KURT SIMSSAMPLE ID
(if applicable):
RW4

DESCRIPTION: perspective photo of RW4.

SITE NAME: MAPCO GAS PRODUCTS, INC.

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U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1145

DIRECTION OF
PHOTOGRAPH:

South

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
KURT SIMSSAMPLE ID
(if applicable):
RW3

DESCRIPTION: Close up of residential well sample RW3

DATE: JUNE 13, 1989

TIME: 1145

DIRECTION OF
PHOTOGRAPH:

South

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
KURT SIMSSAMPLE ID
(if applicable):
RW3

DESCRIPTION: Perspective photo of RW3.

SITE NAME: MAPCO GAS PRODUCTS, INC.

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U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FILO483SB

DATE: JUNE 13, 1989

TIME: 1145

DIRECTION OF
PHOTOGRAPH:

North

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
KURT SIMSSAMPLE ID
(if applicable):
RW3

DESCRIPTION: Perspective of RW3,



DATE: JUNE 13, 1989

TIME: 1415

DIRECTION OF
PHOTOGRAPH:

NA

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
KURT SIMSSAMPLE ID
(if applicable):
RW2

DESCRIPTION: Close up of residential well sample RW2.



SITE NAME: MAPCO GAS PRODUCTS, INC.

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U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1415

DIRECTION OF
PHOTOGRAPH:
South WestWEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
KURT SIMSSAMPLE ID
(if applicable):
RW2

DESCRIPTION: Perspective photo's of residential well RW2.



DATE: JUNE 13, 1989

TIME: 1100

DIRECTION OF
PHOTOGRAPH:
North EastWEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
KURT SIMSSAMPLE ID
(if applicable):
RW1

DESCRIPTION: Close up of residential well sample RW1



SITE NAME: MAPCO GAS PRODUCTS, INC.

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U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1100

DIRECTION OF
PHOTOGRAPH:North EastWEATHER
CONDITIONS:SUNNY, 65° F.PHOTOGRAPHED BY:
KURT SIMSSAMPLE ID
(if applicable):
RW1DESCRIPTION: Perspective photo of RW1.

DATE: JUNE 13, 1989

TIME: 1230

DIRECTION OF
PHOTOGRAPH:
North-NorthwestWEATHER
CONDITIONS:SUNNY, 65° F.PHOTOGRAPHED BY:
Deb BarrettSAMPLE ID
(if applicable):
NADESCRIPTION: Photo of storage tanks, lagoon with portable pump.

SITE NAME: MAPCO GAS PRODUCTS, INC.

PAGE 13 OF 28

U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1230

DIRECTION OF
PHOTOGRAPH:

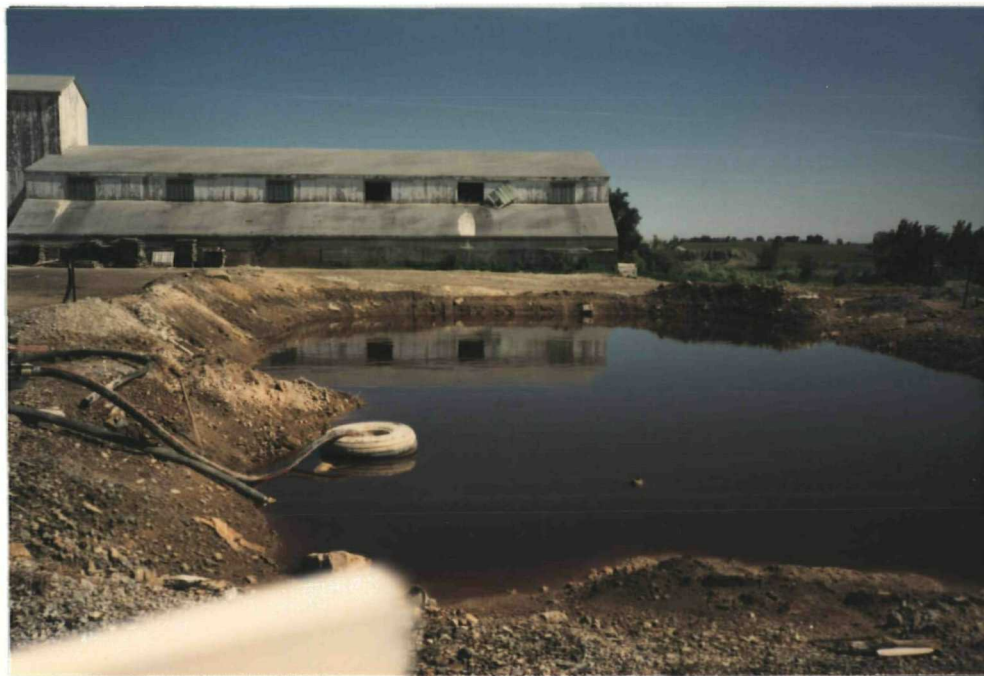
North

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
RONNIE GALMORESAMPLE ID
(if applicable):
NA

DESCRIPTION: Photo of lagoon and dry pesticide storage building.



DATE: JUNE 13, 1989

TIME: 1235

DIRECTION OF
PHOTOGRAPH:

North-North west

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
RONNIE GALMORESAMPLE ID
(if applicable):
NA

DESCRIPTION: Photo of lagoon, dry powder pesticide storage building, and storage tanks.



FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: MAPCO GAS PRODUCTS, INC.

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U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1230

DIRECTION OF
PHOTOGRAPH:
North-North East

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
DEBORAH BARRETT

SAMPLE ID
(if applicable):
NA



DESCRIPTION: A pile of refuse located near the lagoon, and
the dry pesticide storage building in the background.

DATE: JUNE 13, 1989

TIME: 1230

DIRECTION OF
PHOTOGRAPH:
South-South east

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
DEBORAH BARRETT

SAMPLE ID
(if applicable):
NA



DESCRIPTION: Photo of the on site lagoon and the quarry
is in the background.

SITE NAME: MAPCO GAS PRODUCTS, INC.

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U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1310

DIRECTION OF
PHOTOGRAPH:

West

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:

Deb Barrett

SAMPLE ID
(if applicable):

NA



DESCRIPTION: The inside of the dry pesticide storage building.

DATE: JUNE 13, 1989

TIME: 1235

DIRECTION OF
PHOTOGRAPH: North-North west

WEATHER
CONDITIONS: SUNNY, 65° F.

PHOTOGRAPHED BY: Deb Barrett

SAMPLE ID
(if applicable): NA

DESCRIPTION: The underground
water pipe from the quarry
had several leaks in it. Water
was notice leaking out of
the ground by F-I-T.



FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: MAPCO GAS PRODUCTS, INC.

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U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1310

DIRECTION OF PHOTOGRAPH:

West

WEATHER CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:

DEBORAH BARRETT

SAMPLE ID

(if applicable):



DESCRIPTION: The in-side of the dry pesticide storage building.

DATE: JUNE 13, 1989

TIME: 1310

DIRECTION OF PHOTOGRAPH:

North West

WEATHER CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:

DEBORAH BARRETT

SAMPLE ID

(if applicable):



DESCRIPTION: The back entrance to the dry pesticide storage building. The building does not have doors.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: MAPCO GAS PRODUCTS, INC.

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U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1315

DIRECTION OF
PHOTOGRAPH:

East

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
RONNIE GALMORESAMPLE ID
(if applicable):
NADESCRIPTION: Refuse located on the side of a slope behind
the dry pesticide storage building.

DATE: JUNE 13, 1989

TIME: 1315

DIRECTION OF
PHOTOGRAPH:

East

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
RONNIE GALMORESAMPLE ID
(if applicable):
NADESCRIPTION: Refuse, tires, concrete pieces, wire, storage tanks, and
drums, are located on the side of a slope behind the dry pesticide
storage building. The quarry is a algae green color.

SITE NAME: MAPCO GAS PRODUCTS, INC.

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U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1340

DIRECTION OF
PHOTOGRAPH:

North

WEATHER
CONDITIONS:

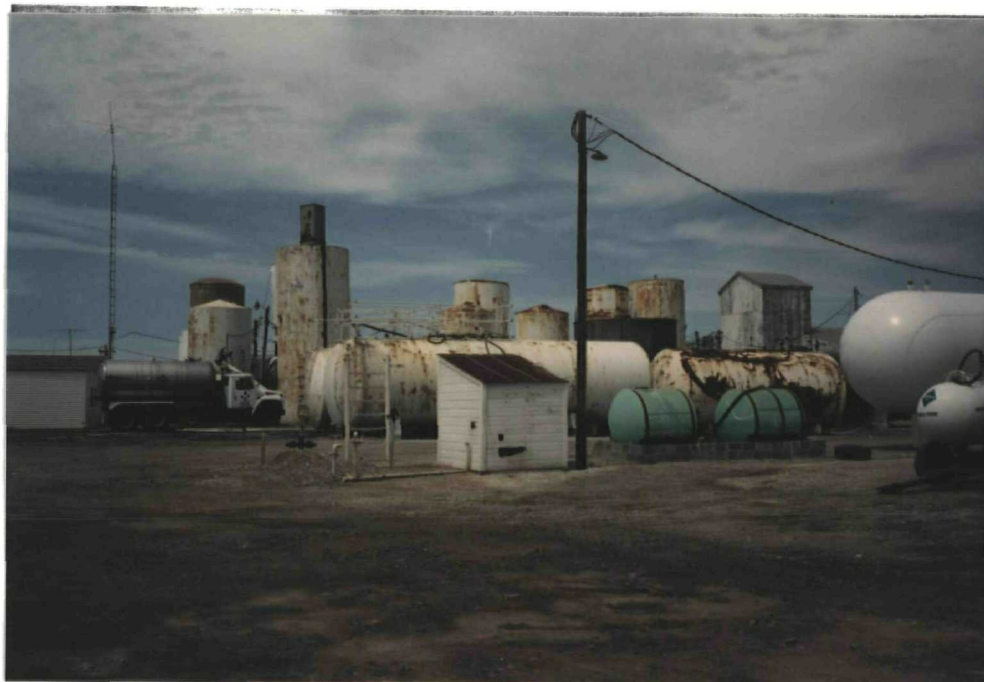
SUNNY, 65° F.

PHOTOGRAPHED BY:

Deb Barrett

SAMPLE ID
(if applicable):

N/A



DESCRIPTION: Storage tanks located on-site

DATE: JUNE 13, 1989

TIME: 1405

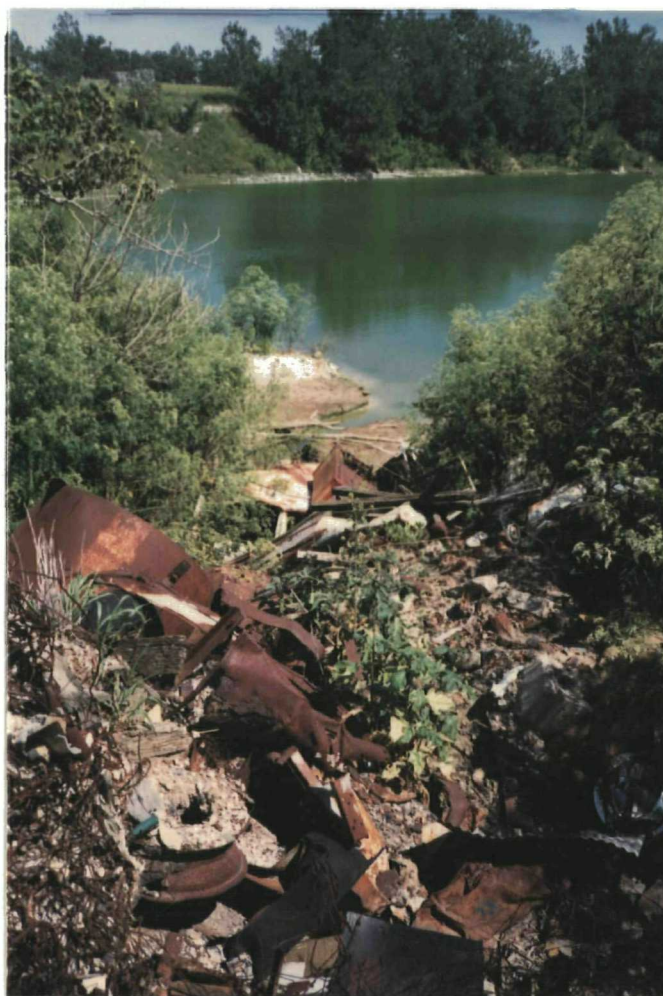
DIRECTION OF
PHOTOGRAPH: South-South east

WEATHER
CONDITIONS: SUNNY, 65° F.

PHOTOGRAPHED BY: Deb Barrett

SAMPLE ID
(if applicable): Refuse, storage

DESCRIPTION: tank, auto parts
wire, pesticide container,
and paint cans, located on
a slope east of the on-site
lagoon.



FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: MAPCO GAS PRODUCTS, INC.

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U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1330

DIRECTION OF PHOTOGRAPH:
South

WEATHER CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
RONNIE GALMORE

SAMPLE ID (if applicable):
NA

DESCRIPTION: Small propane storage tanks.



DATE: JUNE 13, 1989

TIME: 1400

DIRECTION OF PHOTOGRAPH:
South-East

WEATHER CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
RONNIE GALMORE

SAMPLE ID (if applicable):
NA

DESCRIPTION: Refuse locate on a slope, east of the on-site lagoon.



FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: MAPCO GAS PRODUCTS, INC.

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U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

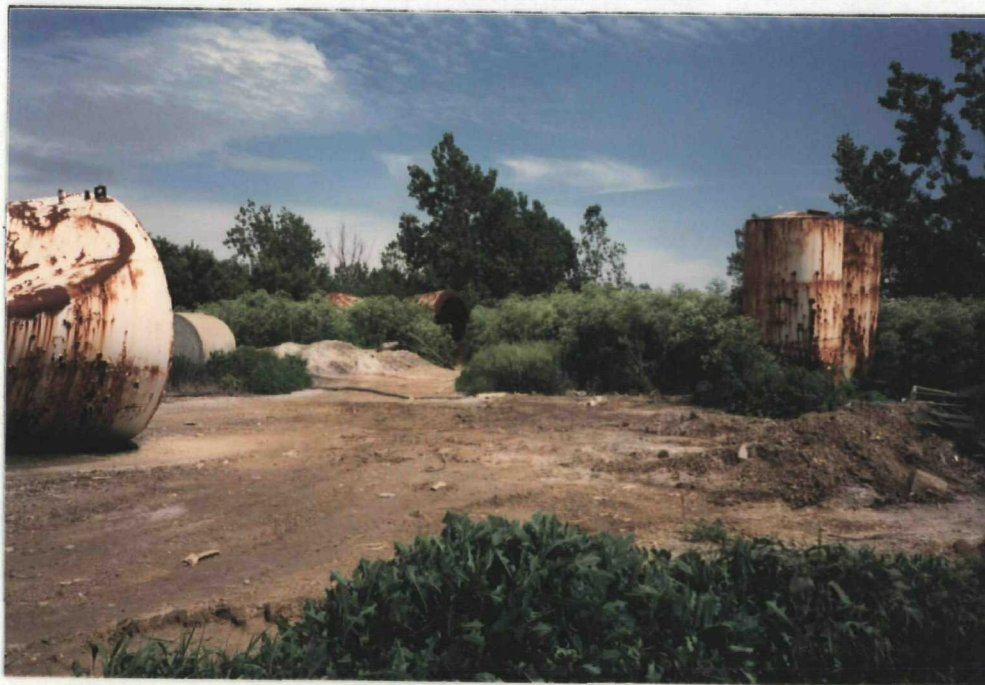
DATE: JUNE 13, 1989

TIME: 1330

DIRECTION OF
PHOTOGRAPH:South - EastWEATHER
CONDITIONS:SUNNY, 65° F.PHOTOGRAPHED BY:
RONNIE GALMORESAMPLE ID
(if applicable):
NADESCRIPTION: Anhydrous Ammonia storage tanks.

DATE: JUNE 13, 1989

TIME: 1335

DIRECTION OF
PHOTOGRAPH:South-South EastWEATHER
CONDITIONS:SUNNY, 65° F.PHOTOGRAPHED BY:
RONNIE GALMORESAMPLE ID
(if applicable):
NADESCRIPTION: Old rusting storage tank. no longer used.

SITE NAME: MAPCO GAS PRODUCTS, INC.

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U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1500

DIRECTION OF
PHOTOGRAPH:
South-South East

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
Deb Barrett

SAMPLE ID
(if applicable):
NA



DESCRIPTION: Old storage tanks and 55 gallon drums.

DATE: JUNE 13, 1989

TIME: 1500

DIRECTION OF
PHOTOGRAPH: South

WEATHER
CONDITIONS: SUNNY, 65° F.

PHOTOGRAPHED BY: Deb Barrett

SAMPLE ID
(if applicable): Drum located

DESCRIPTION: next to the old
storage tanks. The labels on
the side of the drums read
"Flammable Liquid", "Dow
N Serve 24 - Nitrogen
stabilizer.



FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: MAPCO GAS PRODUCTS, INC.

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U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1500

DIRECTION OF PHOTOGRAPH:

NA

WEATHER CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
DEBORAH BARRETT

SAMPLE ID
(if applicable):

NA



DESCRIPTION: A small 5gallon can inside a 55 gallon drum.

There was some type of liquid in the bottom of the drum, which is located next to the old storage tanks.

DATE: JUNE 13, 1989

TIME: 1515

DIRECTION OF PHOTOGRAPH:

North-North East

WEATHER CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
DEBORAH BARRETT

SAMPLE ID
(if applicable):

NA



DESCRIPTION: Large propane storage tanks inside a fenced area.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: MAPCO GAS PRODUCTS, INC.

PAGE 23 OF 28

U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1500

DIRECTION OF
PHOTOGRAPH:
EastWEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
RONNIE GALMORESAMPLE ID
(if applicable):

DESCRIPTION: An old rusting storage tank.

DATE: JUNE 13, 1989

TIME: 1515

DIRECTION OF
PHOTOGRAPH:
South WestWEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
RONNIE GALMORESAMPLE ID
(if applicable):

DESCRIPTION: A storage building and storage tanks located on-site, most of the storage tanks are rusting.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Mapro Gas Products, Inc

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U.S. EPA ID: FLD042849547

TDD: F05-8810-017

PAN: FIL0483SB



DATE: June 13, 1989 TIME: 1510 DIRECTION OF PHOTOGRAPH: West PHOTOGRAPHED BY: Ronnie Galmore

WEATHER CONDITIONS: Sunny 65° F. SAMPLE ID (if applicable): NA

DESCRIPTION: Large storage tanks, storage building and a un used storage tank.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: MAPCO GAS PRODUCTS, INC.

PAGE 25 OF 28

U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB



DATE: JUNE 13, 1989 TIME: 1520 DIRECTION OF PHOTOGRAPH: South PHOTOGRAPHED BY: DEBORAH BARRETT

WEATHER CONDITIONS: SUNNY, 65°F. SAMPLE ID (if applicable): NA

DESCRIPTION: Mapco Gas Products, Inc. office building and Precision Tank and Equipment Company

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: MAPCO GAS PRODUCTS, INC.

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U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1550

DIRECTION OF
PHOTOGRAPH:

East

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
RONNIE GALMORESAMPLE ID
(if applicable):
NA

DESCRIPTION: Large storage tanks. One of the storage tanks is dented.

DATE: JUNE 13, 1989

TIME: 1555

DIRECTION OF
PHOTOGRAPH:

South-East

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
RONNIE GALMORESAMPLE ID
(if applicable):
NA

DESCRIPTION: Some of the storage tanks had discolored water around them.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: MAPCO GAS PRODUCTS, INC.

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U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1600

DIRECTION OF PHOTOGRAPH:

WEATHER CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
DEBORAH BARRETT

SAMPLE ID
(if applicable):



DESCRIPTION: Aerial photo of the site take in 1984

DATE: JUNE 13, 1989

TIME: 1600

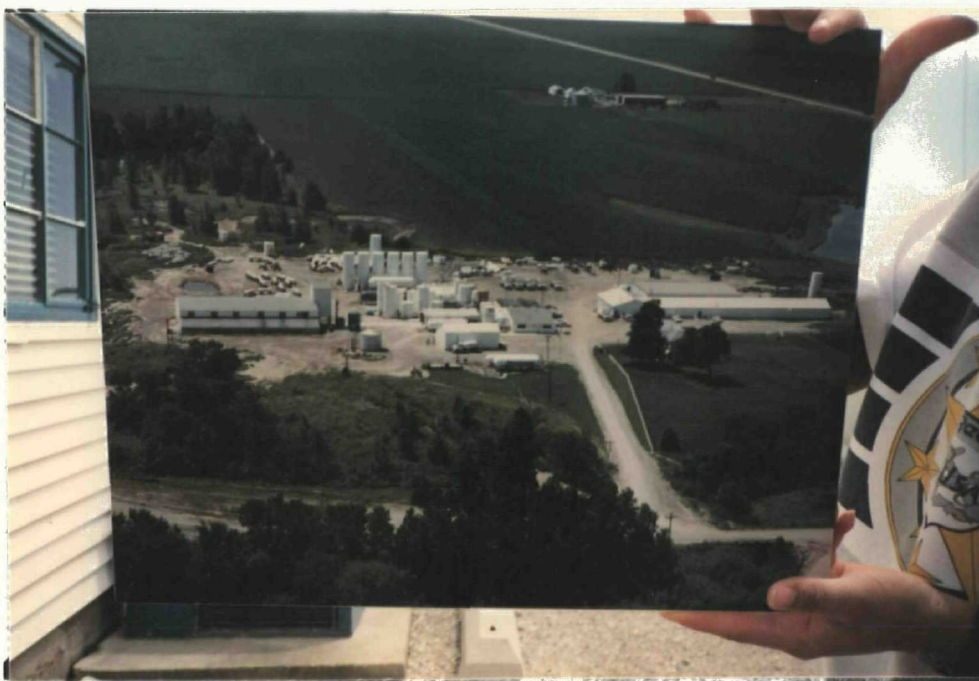
DIRECTION OF PHOTOGRAPH:

WEATHER CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
DEBORAH BARRETT

SAMPLE ID
(if applicable):



DESCRIPTION: Aerial photo of the site, 1984.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: MAPCO GAS PRODUCTS, INC.

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U.S. EPA ID: ILD042849547

TDD: F05-8810-017

PAN: FIL0483SB

DATE: JUNE 13, 1989

TIME: 1600

DIRECTION OF
PHOTOGRAPH:
NA

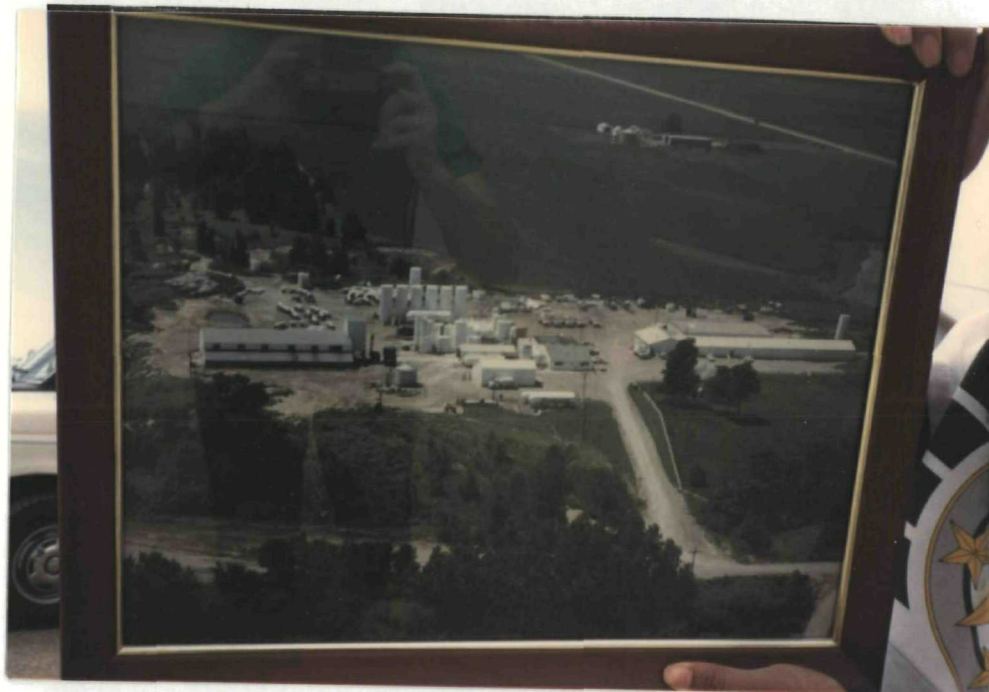
WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:

SAMPLE ID
(if applicable):
NA

DESCRIPTION: A aerial photo of the site.



DATE: JUNE 13, 1989

TIME: 1600

DIRECTION OF
PHOTOGRAPH:
NA

WEATHER
CONDITIONS:

SUNNY, 65° F.

PHOTOGRAPHED BY:
DEBORAH BARRETT

SAMPLE ID
(if applicable):
NA

DESCRIPTION: Aerial photo of the site



APPENDIX D

U.S. EPA TARGET COMPOUND LIST AND
TARGET ANALYTE LIST
QUANTITATION/DETECTION LIMITS

ROUTINE ANALYTICAL SERVICES
CONTRACT REQUIRED DETECTION AND QUANTITATION LIMITS

Contract Laboratory Program
Target Compound List
Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Chloromethane	74-87-3	10 ug/L	10 ug/Kg
Bromomethane	74-83-9	10	10
Vinyl chloride	75-01-4	10	10
Chloroethane	75-00-3	10	10
Methylene chloride	75-09-2	5	5
Acetone	67-64-1	10	5
Carbon disulfide	75-15-0	5	5
1,1-dichloroethene	75-35-4	5	5
1,1-dichloroethane	75-34-3	5	5
1,2-dichloroethene (total)	540-59-0	5	5
Chloroform	67-66-3	5	5
1,2-dichloroethane	107-06-2	5	5
2-butanone (MEK)	78-93-3	10	10
1,1,1-trichloroethane	71-55-6	5	5
Carbon tetrachloride	56-23-5	5	5
Vinyl acetate	108-05-4	10	10
Bromodichloromethane	75-27-4	5	5
1,2-dichloropropane	78-87-5	5	5
cis-1,3-dichloropropene	10061-01-5	5	5
Trichloroethene	79-01-6	5	5
Dibromochloromethane	124-48-1	5	5
1,1,2-trichloroethane	79-00-5	5	5
Benzene	71-43-2	5	5
Trans-1,3-dichloropropene	10061-02-6	5	5
Bromoform	75-25-2	5	5
4-Methyl-2-pentanone	108-10-1	10	10
2-Hexanone	591-78-6	10	10
Tetrachloroethene	127-18-4	5	5
Toluene	108-88-3	5	5
1,1,2,2-tetrachloroethane	79-34-5	5	5
Chlorobenzene	108-90-7	5	5
Ethyl benzene	100-41-4	5	5
Styrene	100-42-5	5	5
Xylenes (total)	1330-20-7	5	5

Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Phenol	108-95-2	10 ug/L	330 ug/Kg
bis(2-Chloroethyl) ether	111-44-4	10	330
2-Chlorophenol	95-57-8	10	330
1,3-Dichlorobenzene	541-73-1	10	330
1,4-Dichlorobenzene	106-46-7	10	330
Benzyl Alcohol	100-51-6	10	330
1,2-Dichlorobenzene	95-50-1	10	330
2-Methylphenol	95-48-7	10	330
bis(2-Chloroisopropyl) ether	108-60-1	10	330
4-Methylphenol	106-44-5	10	330
N-Nitroso-di-n-dipropylamine	621-64-7	10	330
Hexachloroethane	67-72-1	10	330
Nitrobenzene	98-95-3	10	330
Isophorone	78-59-1	10	330
2-Nitrophenol	88-75-5	10	330
2,4-Dimethylphenol	105-67-9	10	330
Benzoic Acid	65-85-0	50	1600
bis(2-Chloroethoxy) methane	111-91-1	10	330
2,4-Dichlorophenol	120-83-2	10	330
1,2,4-Trichlorobenzene	120-82-1	10	330
Naphthalene	91-20-3	10	330
4-Chloroaniline	106-47-8	10	330
Hexachlorobutadiene	87-68-3	10	300
4-Chloro-3-methylphenol	59-50-7	10	330
2-Methylnaphthalene	91-57-6	10	330
Hexachlorocyclopentadiene	77-47-4	10	330
2,4,6-Trichlorophenol	88-06-2	10	330
2,4,5-Trichlorophenol	95-95-4	50	1600
2-Chloronaphthalene	91-58-7	10	330
2-Nitroaniline	88-74-4	50	1600
Dimethylphthalate	131-11-3	10	330
Acenaphthylene	208-96-8	10	330
2,6-Dinitrotoluene	606-20-2	10	330
3-Nitroaniline	99-09-2	50	1600
Acenaphthene	83-32-9	10	330
2,4-Dinitrophenol	51-28-5	50	1600
4-Nitrophenol	100-02-7	50	1600
Dibenzofuran	132-64-9	10	330
2,4-Dinitrotoluene	121-14-2	10	330
Diethylphthalate	84-66-2	10	330
4-Chlorophenyl-phenyl ether	7005-72-3	10	330

Contract Laboratory Program
Target Compound List
Semi-volatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SLUDGE SEDIMENT
Fluorene	86-73-7	10 ug/L	330 ug/Kg
4-Nitroaniline	100-01-6	50	1600
4,6-Dinitro-2-methylphenol	534-52-1	50	1600
N-nitrosodiphenylamine	86-30-6	10	330
4-Bromophenyl-phenylether	101-55-3	10	330
Hexachlorobenzene	118-74-1	10	330
Pentachlorophenol	87-86-5	50	1600
Phenanthrene	85-01-8	10	330
Anthracene	120-12-7	10	330
Di-n-butylphthalate	84-74-2	10	330
Fluoranthene	206-44-0	10	330
Pyrene	129-00-0	10	330
Butylbenzylphthalate	85-68-7	10	330
3,3'-Dichlorobenzidine	91-94-1	20	660
Benzo(a)anthracene	56-55-3	10	330
Chrysene	218-01-9	10	330
bis(2-Ethylhexyl)phthalate	117-81-7	10	330
Di-n-octylphthalate	117-84-0	10	330
Benzo(b)fluoranthene	205-99-2	10	330
Benzo(k)fluoranthene	207-08-9	10	330
Benzo(a)pyrene	50-32-8	10	330
Indeno(1,2,3-cd)pyrene	193-39-5	10	330
Dibenz(a,h)anthracene	53-70-3	10	330
Benzo(g,h,i)perylene	191-24-2	10	330

Contract Laboratory Program
Target Compound List
Pesticide and PCB Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
alpha-BHC	319-84-6	0.05 ug/L	8 ug/Kg
beta-BHC	319-85-7	0.05	8
delta-BHC	319-86-8	0.05	8
gamma-BHC (Lindane)	58-89-9	0.05	8
Heptachlor	76-44-8	0.05	8
Aldrin	309-00-2	0.05	8
Heptachlor epoxide	1024-57-3	0.05	8
Endosulfan I	959-98-8	0.05	8
Dieldrin	60-57-1	0.10	16
4,4'-DDE	72-55-9	0.10	16
Endrin	72-20-8	0.10	16
Endosulfan II	33213-65-9	0.10	16
4,4'-DDD	72-54-8	0.10	16
Endosulfan sulfate	1031-07-8	0.10	16
4,4'-DDT	50-29-3	0.10	16
Methoxychlor (Mariate)	72-43-5	0.5	80
Endrin ketone	53494-70-5	0.10	16
alpha-Chlordane	5103-71-9	0.5	80
gamma-chlordane	5103-74-2	0.5	80
Toxaphene	8001-35-2	1.0	160
AROCLOR-1016	12674-11-2	0.5	80
AROCLOR-1221	11104-28-2	0.5	80
AROCLOR-1232	11141-16-5	0.5	80
AROCLOR-1242	53469-21-9	0.5	80
AROCLOR-1248	12672-29-6	0.5	80
AROCLOR-1254	11097-69-1	1.0	160
AROCLOR-1260	11096-82-5	1.0	160

Contract Laboratory Program
Target Analyte List
Inorganic Quantitation Limits

COMPOUND	PROCEDURE	SOIL WATER	SEDIMENT SLUDGE
Aluminum	ICP	200 ug/L	40 ug/Kg
Antimony	Furnace	60	2.4
Arsenic	Furnace	10	2
Barium	ICP	200	40
Beryllium	ICP	5	1
Cadmium	ICP	5	1
Calcium	ICP	5000	1000
Chromium	ICP	10	2
Cobalt	ICP	50	10
Copper	ICP	25	5
Iron	Icp	100	20
Lead	Furnace	5	1
Magnesium	ICP	5000	1000
Manganese	ICP	15	3
Mercury	Cold Vapor	0.2	0.008
Nickel	ICP	40	8
Potassium	ICP	5000	1000
Selenium	Furnace	5	1
Silver	ICP	10	2
Sodium	ICP	5000	1000
Thallium	Furnace	10	2
Vanadium	ICP	50	10
Zinc	ICP	20	4
Cyanide	Color	10	2

**CENTRAL REGIONAL LABORATORY
DETECTION LIMITS**

CENTRAL REGIONAL LABORATORY
VOLATILE DETECTION LIMITS

PARAMETER	CAS #	DETECTION LIMIT IN REAGENT WATER
Benzene	71-43-2	1.5 ug/L
Bromodichloromethane	75-27-4	1.5
Bromoform	75-25-2	1.5
Bromomethane	74-83-9	10
Carbon tetrachloride	56-23-5	1.5
Chlorobenzene	108-90-7	1.5
Chloroethane	75-00-3	1.5
2-Chloroethyl vinyl ether	110-75-8	1.5
Chloroform	67-66-3	1.5
Chloromethane	74-87-3	10
Dibromochloromethane	124-48-1	1.5
1,1-dichloroethane	75-34-3	1.5
1,2-dichloroethane	107-06-2	1.5
1,1-dichloroethene	75-35-4	1.5
trans-1,2-dichloroethene	156-60-5	1.5
1,2-dichloropropane	78-87-5	1.5
cis-1,3-dichloropropene	10061-01-5	2
trans-1,3-dichloropropene	10061-02-6	1
Ethyl benzene	100-41-4	1.5
Methylene chloride*	75-09-2	1
1,1,2,2-tetrachloroethane	79-34-5	1.5
Tetrachloroethene	127-18-4	1.5
Toluene*	108-88-3	1.5
1,1,1-trichloroethane	71-55-6	1.5
1,1,2-trichloroethane	79-00-5	1.5
Trichloroethene	79-01-6	1.5
Vinyl chloride	75-01-4	10
Acrolein	107-02-8	100
Acetone*	67-64-1	75
Acrylonitrile	107-13-1	50
Carbon disulfide	75-15-0	3
2-butanone	78-93-3	(50)
Vinyl acetate	108-05-4	15
4-Methyl-2-Pentanone	108-10-1	(3)
2-Hexanone	519-78-6	(50)
Styrene	100-42-5	1
m-xylene	108-38-3	2
o-xylene**	95-47-6	
p-xylene**	106-42-3	2.5**
Total Xylene	1330-02-7	

* Common Laboratory Solvents.

Blank Limit is SX Method Detection Limit.

() Values in parentheses are estimates.

Actual values are being determined at this time.

** The o-xylene and p-xylene are reported as a total of the two.

CRL
SEMIVOLATILE DETECTION LIMITS

PARAMETER	CAS #	DETECTION LIMIT	BLANK LIMIT
Aniline	62-53-3	1.5 ug/L	3 ug/L
Bis(2-chloroethyl)ether	111-44-4	1.5	3
Phenol	108-95-2	2	4
2-Chlorophenol	95-57-8	2	5
1,3-Dichlorobenzene	541-73-1	2	4
1,4-Dichlorobenzene	106-46-7	2	4
1,2-Dichlorobenzene	95-50-1	2.5	5
Benzyl alcohol	100-51-6	2	5
Bis(2-chloroisopropyl) ether	39638-32-9	2.5	5
2-Methylphenol	95-48-7	1	2
Hexachloroethane	67-72-1	2	4
N-nitrosodipropylamine	621-64-7	1.5	3
Nitrobenzene	98-95-3	2.5	5
4-Methylphenol	106-44-5	1	2
Isophorone	78-59-1	2.5	5
2-Nitrophenol	88-75-5	2	4
2,4-Dimethylphenol	105-67-9	2	4
Bis(2-chloroethoxy)methane	111-91-1	2.5	5
2,4-Dichlorophenol	120-83-2	2	4
1,2,4-Trichlorobenzene	120-82-1	2	4
Naphthalene	91-20-3	2	4
4-Chloroaniline	106-47-8	2	4
Hexachlorobutadiene	87-68-3	2.5	5
Benzoic acid	65-85-0	(30)	(60)
2-Methylnapthalene	91-57-6	2	4
4-Chloro-3-methylphenol	59-50-7	1.5	3
Hexachlorocyclopentadiene	77-47-4	2	4
2,4,6-Trichlorophenol	88-06-2	1.5	3
2,4,5-Trichlorophenol	95-95-4	1.5	3
2-Chloronapthalene	91-58-7	1.5	3
Acenaphthylene	208-96-8	1.5	3
Dimethyl phthalate	131-11-3	1.5	3
2,6-Dinitrotoluene	606-20-2	1	2
Acenaphthene	83-32-9	1.5	3
3-Nitroaniline	99-09-2	2.5	5
Dibenzofuran	132-64-9	1	2
2,4-Dinitrophenol	51-28-5	(15)	(30)
2,4-Dinitrotoluene	121-14-2	1	2
cont.			

CRL
SEMI-VOLATILE DETECTION LIMITS

PARAMETER	CAS #	DETECTION LIMIT	BLANK (a) LIMIT
Fluorene	86-73-7	1 ug/L	2 ug/L
4-Nitrophenol	100-02-7	1.5	3
4-Chlorophenyl phenyl ether	7005-72-3	1	2
Diethylphthalate	84-66-2	1	2
4,6-dinitro-2-methylphenol	534-52-1	(15)	(30)
1,2-Diphenylhydrazine	122-66-7	1	2
n-Nitrosodiphenylamine *	86-30-6		
Diphenylamine *	122-39-4	1.5	3
4-Nitroaniline	100-01-6	3	6
4-Bromophenyl-phenylether	101-55-3	1.5	3
Hexachlorobenzene	118-74-1	1.5	3
Pentachlorophenol	87-86-5	2	4
Phenanthrene	85-01-8	1	2
Anthracene	120-12-7	2.5	5
Di-n-butylphthalate	84-74-2	2	4
Fluoranthene	206-44-0	1.5	3
Pyrene	129-00-0	1.5	3
Butylbenzylphthalate	85-68-7	3.5	7
Chrysene **	218-01-9		
Benzo(a)anthracene **	56-55-3	1.5	3
bis(2-Ethylhexyl)phthalate	117-81-7	1.	2
Di-n-octyl phthalate	117-84-0	1.5	3
Benzo(b)fluoranthene ***	205-99-2		
Benzo(k)fluoranthene ***	207-08-9	1.5	3
Benzo(a)pyrene	50-32-8	2	4
Indeno(1,2,3-cd)pyrene	193-39-5	3.5	7
Dibenzo(a,h)anthracene	53-70-3	2.5	5
Benzo(g,h,i)perylene	191-24-2	4	8
2-Nitroaniline	88-74-4	1	2
cont.			9/87

* These two parameters are reported as a total.

** These two parameters are reported as a total.

*** These two parameters are reported as a total.

(a) If the blank limit is exceeded, the sample is reextracted and rerun.

() Values in parentheses are estimates.

The actual values are being determined at this time.

Note: Limits are for reagent water.

CRL
PESTICIDE AND PCB DETECTION LIMITS

PARAMETER	CAS #	DETECTION LIMIT
Aldrin	309-00-2	0.005 ug/L
alpha BHC	319-84-6	(0.010)
beta BHC	319-85-7	(0.005)
delta BHC	319-86-8	(0.005)
gamma BHC (Lindane)	58-89-9	0.005
Chlordane	57-74-8	(0.020)
4,4'-DDD	72-54-8	(0.020)
4,4'-DDE	72-55-9	(0.005)
4,4'-DDT	50-29-3	0.020
Dieldrin	60-57-1	0.010
Endosulfan I	959-98-8	0.010
Endosulfan II	33213-65-9	0.010
Endosulfan sulfate	1031-07-8	(0.10)
Endrin	72-20-8	0.010
Endrin aldehyde	7421-93-4	(0.030)
Endrin ketone	53494-70-5	(0.030)
Heptachlor	76-44-8	0.030
Heptachlor epoxide	1024-57-3	0.005
4,4'-Methoxychlor	72-43-5	0.020
Toxaphene	8001-35-2	(0.25)
PCB-1242	53469-21-9	(0.10)
PCB-1248	12672-29-6	(0.10)
PCB-1254	11097-69-1	(0.10)
PCB-1260	11096-82-5	(0.10)

() Values in parentheses are estimates.
Actual values are being determined at this time.

Note: Limits are for reagent water.

CRL
INORGANIC DETECTION LIMITS

JANUARY 1986

COMPOUND	PROCEDURE	DETECTION LIMITS	RANGE	UNITS
Aluminum	ICP	80	80 to 1,000,000	ug/L
Antimony	Furnace	2	2 to 30	ug/L
Arsenic	Furnace	2	2 to 30	ug/L
Barium	ICP	6	6 to 20,000	ug/L
Beryllium	ICP	1	1 to 20,000	ug/L
Boron	ICP	80	80 to 20,000	ug/L
Cadmium	ICP	10	10 to 20,000	ug/L
Cadmium	Furnace	0.2	0.2 to 2	ug/L
calcium	ICP	0.5	0.5 to 1,000	ug/L
Chromium	ICP	8	8 to 20,000	ug/L
Cobalt	ICP	6	6 to 20,000	ug/L
Copper	ICP	6	6 to 20,000	ug/L
iron	ICP	80	80 to 1,000,000	ug/L
Lead	Furnace	2	2 to 30	ug/L
Lead	ICP	70	70 to 20,000	ug/L
Lithium	ICP	10	10 to 20,000	ug/L
Magnesium	ICP	0.1	0.1 to 200	ug/L
Manganese	ICP	5	5 to 20,000	ug/L
Mercury	Cold vapor	0.1	0.1 to 2	ug/L
Molybdenum	ICP	15	15 to 20,000	ug/L
Nickel	ICP	15	15 to 20,000	ug/L
Potassium	ICP	5	5 to 1,000	ug/L
Selenium	Furnace	2	2 to 30	ug/L
Silver	ICP	6	6 to 10,000	ug/L
Sodium	ICP	1	1 to 1,000	ug/L
Strontium	ICP	10	10 to 20,000	ug/L
Sulfide	Titration	1	< 1	ug/L
Sulfide	Color	0.05	< 1	ug/L
Thallium	Furnace	2	2 to 30	ug/L
Titanium	ICP	25	25 to 20,000	ug/L
Tin	ICP	40	40 to 20,000	ug/L
Vanadium	ICP	5	5 to 20,000	ug/L
Yttrium	ICP	5	5 to 20,000	ug/L
Zinc	ICP	40	40 to 1,000,000	ug/L
Cyanide	AA	8	8 to 200	ug/L

Note: The above list may or may not contain compounds that are routinely analyzed at CRL for low level detection limits for drinking water.

See Inorganic Routine Analytical Services for related CAS #.

SPECIAL ANALYTICAL SERVICES
DETECTION LIMITS

Drinking Water Samples

SPECIAL ANALYTICAL SERVICES DRINKING WATER
VOLATILE QUANTITATION LIMITS

PARAMETER	CAS #	DETECTION LIMIT IN REAGENT WATER
Benzene	71-43-2	1.5 ug/L
Bromodichloromethane	74-27-4	1.5
Bromoform	75-25-2	1.5
Bromomethane	74-83-9	10
Carbon tetrachloride	56-23-5	1.5
Chlorobenzene	108-90-7	1.5
Chloroethane	75-00-3	1.5
2-Chloroethyl vinyl ether	110-75-8	1.5
Chloroform	67-66-3	1.5
Chloromethane	74-87-3	10
Dibromochloromethane	124-48-1	1.5
1,1-Dichloroethane	75-34-3	1.5
1,2-Dichloroethane	107-06-2	1.5
1,1-Dichloroethene	75-35-4	1.5
trans-1,2-Dichloroethene	156-60-5	1.5
1,2-Dichloropropane	78-87-5	1.5
cis-1,3-Dichloropropene	10061-01-5	2
trans-1,3-Dichloropropene	10061-02-6	1
Ethyl benzene	100-41-4	1.5
Methylene chloride *	75-09-2	1
1,1,2,2-Tetrachloroethane	79-34-5	1.5
Tetrachloroethene	127-18-4	1.5
Toluene *	108-88-3	1.5
1,1,1-Trichloroethane	71-55-6	1.5
1,1,2-Trichloroethane	79-00-5	1.5
Trichloroethene	79-01-6	1.5
Vinyl chloride	75-01-4	10
Acrolein	107-02-8	100
Acetone *	67-64-1	75
Acrylonitrile	107-13-1	50
Carbon disulfide	75-15-0	3
2-Butanone	78-93-3	(50)
Vinyl acetate	108-05-4	15
4-Methyl-2-pentanone	108-10-1	(3)
2-Hexanone	519-78-6	(50)
Styrene	100-42-5	1
m-Xylene	108-38-3	2
o-Xylene **	95-47-6	
p-Xylene **	106-42-3	2.5 **
Xylene (total)	1330-02-7	

* Common laboratory solvents.

Blank limit is 5x method detection limit.

() Values in parentheses are estimates.

actual values are being determined at this time.

** The o-xylene and p-xylene are reported as a total of the two.

SAS DRINKING WATER
SEMI-VOLATILES QUANTITATION LIMITS

PARAMETER	CAS #	DETECTION LIMIT
Aniline	62-53-3	1.5 ug/l
Bis(2-chloroethyl)ether	111-44-4	1.5
Phenol	108-95-2	2
2-Chlorophenol	95-57-8	2
1,3-Dichlorobenzene	541-73-1	2
1,4-Dichlorobenzene	106-46-7	2
1,2-Dichlorobenzene	95-50-1	2.5
Benzyl alcohol	100-51-6	2
Bis(2-chloroisopropyl)ether	39638-32-9	2.5
2-Methylphenol	95-48-7	1
Hexachloroethane	67-72-1	2
n-Nitrosodipropylamine	621-64-7	1.5
Nitrobenzene	98-95-3	2.5
4-Methylphenol	88-75-5	1
Isophorone	78-59-1	2.5
2-Nitrophenol	88-75-5	2
2,4-Dimethylphenol	105-67-9	2
Bis(2-Chloroethoxy)methane	111-91-1	2.5
2,4-Dichlorophenol	120-83-2	2
1,2,4-Trichlorobenzene	120-82-1	2
Naphthalene	91-20-3	2
4-Chloroaniline	106-47-8	2
Hexachlorobutadiene	87-68-3	2.5
Benzoic Acid	65-85-0	(30)
2-Methylnaphthalene	91-57-6	2
4-Chloro-3-methylphenol	59-50-7	1.5
Hexachlorocyclopentadiene	77-47-4	2
2,4,6-Trichlorophenol	88-06-2	1.5
2,4,5-Trichlorophenol	95-95-4	1.5
2-Chloronaphthalene	91-58-7	1.5
Acenaphthylene	208-96-8	1.5
Dimethyl phthalate	131-11-3	1.5
2,6-Dinitrotoluene	606-20-2	1
Acenaphthene	83-32-9	1.5
3-Nitroaniline	99-09-2	2.5
Dibenzofuran	132-64-9	1
2,4-Dinitrophenol	51-28-5	(15)
2,4-Dinitrotoluene	121-14-2	1

SAS DRINKING WATER
SEMIVOLATILE QUANTITATION LIMITS

PARAMETER	CAS #	DETECTION LIMIT
Fluorene	86-73-7	1 ug/L
4-Nitrophenol	100-02-7	1.5
4-Chlorophenyl phenyl ether	7005-72-3	1
Diethyl phthalate	84-66-2	1
4,6-Dinitro-2-methylphenol	534-52-1	(15)
1,2-Diphenylhydrazine	122-66-7	1
n-Nitrosodiphenylamine *	86-30-6	
Diphenylamine *	122-39-4	1.5
4-Nitroaniline	100-01-6	3
4-Bromophenyl-phenylether	101-55-3	1.5
Hexachlorobenzene	118-74-1	1.5
Pentachlorophenol	87-86-5	2
Phenanthrene	85-01-8	1
Anthracene	120-12-7	2.5
di-n-Butyl phthalate	84-74-2	2
Fluoranthene	206-44-0	1.5
Pyrene	129-00-0	1.5
Butyl benzyl phthalate	85-68-7	3.5
Chrysene **	218-01-9	
Benzo(A)Anthracene **	56-55-3	1.5
bis(2-ethylhexyl)phthalate	117-81-7	1
di-n-Octyl phthalate	117-84-0	1.5
Benzo(b)fluoranthene ***	205-99-2	
Benzo(k)fluoranthene ***	207-08-9	1.5
Benzo(a)pyrene	50-32-8	2
Indeno(1,2,3-cd)pyrene	193-39-5	3.5
Dibenzo(a,h)anthracene	53-70-3	2.5
Benzo(g,h,i)perylene	191-24-2	4
2-Nitroaniline	88-74-4	1

* These two parameters are reported as a total.

** These two parameters are reported as a total.

*** These two parameters are reported as a total.

() Values in parentheses are estimates.

The actual values are being determined at this time.

Note: Limits are for reagent water.

SAS DRINKING WATER
PESTICIDE AND PCB QUANTITATION LIMITS

PARAMETER	CAS #	DETECTION LIMIT
Aldrin	309-00-2	0.005 ug/L
alpha BHC	319-84-6	(0.010)
beta BHC	319-85-7	(0.005)
delta BHC	319-86-8	(0.005)
gamma BHC (Lindane)	58-89-9	0.005
Chlordane	57-74-9	(0.020)
4,4'-DDD	72-54-8	(0.020)
4,4'-DDE	72-55-9	(0.005)
4,4'-DDT	50-29-3	0.020
Dieldrin	60-57-1	0.010
Endosulfan I	959-98-8	0.010
Endosulfan II	33213-65-9	0.010
Endosulfan sulfate	1031-07-8	(0.10)
Endrin	72-20-8	0.010
Endrin Aldehyde	7421-93-4	(0.030)
Endrin Ketone	53494-70-5	(0.030)
Heptachlor	76-44-8	0.030
Heptachlor Epoxide	1024-57-3	0.005
4,4'-Methoxychlor	72-43-5	0.020
Toxaphene	8001-35-2	(0.25)
PCB-1242	53469-21-9	(0.10)
PCB-1248	12672-29-6	(0.10)
PCB-1254	11097-69-1	(0.10)
PCB-1260	11096-82-5	(0.10)

() Values in parentheses are estimates.
Actual values are being determined at this time.

Note: Limits are for reagent water.

SAS DRINKING WATER
INORGANIC DETECTION LIMITS

JANUARY 1986

PARAMETER	PROCEDURE	DETECTION LIMIT
Aluminum	ICP	100
Antimony	GFAA	2
Arsenic	GFAA	2
Barium	ICP	50
Beryllium	ICP	5
Cadmium	ICP	10
Cadmium	GFAA	0.2
Calcium	ICP	1000
Chromium	ICP	10
Cobalt	ICP	10
Copper	ICP	10
Iron	ICP	100
Lead	GFAA	2
Magnesium	ICP	1000
Manganese	ICP	10
Mercury	Cold Vapor	0.2
Nickel	ICP	20
Potassium	ICP	2000
Selenium	GFAA	2
Silver	ICP	5
Sodium	ICP	1000
Thallium	GFAA	2
Tin	ICP	40
Vanadium	ICP	10
Zinc	ICP	20
Cyanide	Colorimetric	5.0

Note: The above list may or may not contain compounds that are routinely analyzed at CRL for low level detection limits for drinking water.

See inorganic Routine Analytical Services (RAS) for related CAS #.

**SPECIAL ANALYTICAL SERVICES
DETECTION LIMITS**

High Concentration Samples

SAS HIGH CONCENTRATION
VOLATILES DETECTION LIMITS

PARAMETER	CAS #	DETECTION LIMIT
Benzene	71-43-2	2.5 mg/Kg
Bromodichloromethane	75-27-4	2.5
Bromoform	75-25-2	2.5
Bromomethane	74-83-9	5.0
Carbon tetrachloride	56-23-5	2.5
Chlorobenzene	108-90-7	2.5
Chloroethane	75-00-3	5.0
2-Chloroethylvinylether	110-75-8	5.0
Chloroform	67-66-3	2.5
Chloromethane	74-87-3	2.5
Dibromochloromethane	124-48-1	2.5
1,2-Dichloropropane	156-87-5	2.5
1,2-Dichloroethane	107-06-2	2.5
1,1-Dichloroethene	75-35-4	2.5
trans-1,2-Dichloroethene	156-60-5	2.5
1,2-Dichloropropane	78-87-5	2.5
cis-1,3-Dichloropropene	10061-01-5	2.5
trans-1,3-Dichloropropene	10061-02-6	2.5
Ethyl benzene	100-41-4	2.5
Methylene chloride	75-09-2	2.5
1,1,2,2-Tetrachloroethane	79-34-5	2.5
Tetrachlorethene	127-18-4	2.5
Toluene	108-88-3	2.5
1,1,1-Trichloroethane	71-55-6	2.5
1,1,2-Trichloroethane	79-00-5	2.5
Trichloroethene	79-01-6	2.5
Vinyl chloride	75-01-4	5.0
Acetone	67-64-1	5.0
Carbon disulfide	75-15-0	2.5
2-Butanone	78-93-3	5.0
Vinyl acetate	108-05-4	5.0
4-Methyl-2-pentanone	108-10-1	5.0
2-Hexanone	591-78-6	5.0
Styrene	100-42-5	2.5
Xylenes	1330-02-7	2.5

* o-xylene and p-xylene are reported as a total.

SAS HIGH CONCENTRATION
SEMIVOLATILES DETECTION LIMITS

PARAMETER	CAS #	DETECTION LIMIT
Bis(2-chloroethyl)ether	11-44-4	20
Phenol	108-95-2	20 mg/Kg
2-Chlorophenol	95-57-8	20
1,3-Dichlorobenzene	541-73-1	20
1,4-Dichlorobenzene	106-46-7	20
1,2-Dichlorobenzene	95-50-1	20
Benzyl alcohol	100-51-6	20
bis(2-chloroisopropyl)ether	39638-32-9	20
2-Methylphenol	95-48-7	20
Hexachloroethane	67-72-1	20
N-Nitrosodipropylamine	621-64-7	20
Nitrobenzene	98-95-3	20
4-Methylphenol	106-44-5	20
Isophorone	78-59-1	20
2-Nitrophenol	88-75-5	20
2,4-Dimethylphenol	105-67-9	20
bis(2-chloroethoxy)methane	111-91-1	20
2,4-Dichlorophenol	120-83-2	20
1,2,4-Trichlorobenzene	120-82-1	20
Naphthalene	91-20-3	20
4-Chloroaniline	106-47-8	20
Hexachlorobutadiene	87-68-3	20
Benzoic acid	65-85-0	100
2-Methylnaphthalene	91-57-6	20
4-Chloro-3-methylphenol	59-50-7	20
Hexachlorocyclopentadiene	77-47-4	20
2,4,6-Trichlorophenol	88-06-2	20
2,4,5-Trichlorophenol	95-95-4	100
2-Chloronaphthalene	91-58-7	20
Acenaphthylene	208-96-8	20
Dimethyl phthalate	131-11-3	20
2,6-Dinitrotoluene	606-20-2	20
Acenaphthene	83-32-9	20
2-Nitroaniline	88-74-4	100
3-Nitroaniline	99-09-2	100
Dibenzofuran	132-64-9	20
2,4-Dinitrophenol	51-28-5	100
2,4-Dinitrotoluene	121-14-2	20

SAS HIGH CONCENTRATION
SEMIVOLATILES DETECTION LIMITS

PARAMETER	CAS #	DETECTION LIMIT
Fluorene	86-73-7	20 mg/kg
4-Nitrophenol	100-02-7	100
4-Chlorophenyl phenyl ether	7005-72-3	20
diethyl phthalate	84-66-2	20
4,6-Dinitro-2-methylphenol	534-52-1	100
1,2-Diphenylhydrazine	122-66-7	
n-Nitroso diphenylamine *	86-30-6	20
Diphenylamine *	122-39-4	
4-Nitroaniline	100-01-6	100
4-Bromophenyl phenyl ether	101-55-3	20
Hexachlorobenzene	118-74-1	20
Pentachlorophenol	87-86-5	100
Phenanthrene	85-01-8	20
Anthracene	120-12-7	20
di-n-Butyl phthalate	84-74-2	20
Fluoranthene	206-44-0	20
Pyrene	129-00-0	20
Butyl benzyl phthalate	85-68-7	20
Chrysene **	218-01-9	20
Benzo(a)anthracene **	56-55-3	20
bis(2-ethylhexyl)phthalate	117-81-7	20
di-n-octyl phthalate	117-84-0	20
Benzo(b)fluoranthene ***	205-99-2	20
Benzo(k)fluoranthene ***	207-08-9	20
Indeno(1,2,3-cd)pyrene	193-39-5	20
Dibenzo(a,h)anthracene	53-70-3	20
Benzo(g,h,i)perylene	191-24-2	20
2-Nitroaniline	88-74-4	100

* These two parameters are reported as a total.

** These two parameters are reported as a total.

*** These two parameters are reported as a total.

() Values in parentheses are estimates.

The actual values are being determined at this time.

Note: Limits are for reagent water.

SAS HIGH CONCENTRATION
PESTICIDE AND PCB DETECTION LIMITS

PARAMETER	CAS #	DETECTION LIMIT
Aldrin	309-00-2	20 ng/Kg
alpha BHC	319-84-6	20
beta BHC	319-85-7	20
delta BHC	319-86-8	20
gamma BHC (Lindane)	58-89-9	20
Chlordane	57-74-9	20
alpha-Chlordane		
4,4'-DDD	72-54-8	20
4,4'-DDE	72-55-9	20
4,4'-DDT	50-29-3	20
Dieldrin	60-57-1	20
Endosulfan I	959-98-8	20
Endosulfan II	33213-65-9	20
Endosulfan sulfate	1031-07-8	20
Endrin	72-20-8	20
Endrin aldehyde	7421-93-4	20
Endrin ketone	53494-70-5	20
Heptachlor	76-44-8	20
Heptachlor epoxide	1024-57-3	20
4,4'-Methoxychlor	72-43-5	20
Toxaphene	8001-35-2	20
Monochlorobiphenyl	27323-18-8	100
Dichlorobiphenyl	25512-42-9	100
Trichlorobiphenyl	25323-68-6	100
Pentachlorobiphenyl	25429-29-2	100
Hexachlorobiphenyl	26601-64-9	100
Heptachlorobiphenyl	28655-71-2	100
Octachlorobiphenyl	31472-83-0	100
Nonochlorobiphenyl	53742-07-7	100
Decachlorobiphenyl	2051-24-3	100

SAS HIGH CONCENTRATION
INORGANIC DETECTION LIMITS

PARAMETER	CAS #	DETECTION LIMITS
Aluminum	7429-90-5	400 mg/kg
Antimony	7440-36-0	20
Arsenic	7440-38-2	20
Barium	7440-39-3	120
Beryllium	7440-41-7	40
Cadmium	7440-43-9	6
Calcium	7440-70-2	800
Chromium	7440-47-3	28
Cobalt	7440-48-4	20
Copper	7440-50-8	40
Iron	7439-89-6	200
Lead	7439-92-1	60
Lithium		
Magnesium	7439-95-4	800
Manganese	7439-96-5	40
Mercury	7439-97-6	0.3
Molybdenum		40
Nickel	7440-02-0	40
Potassium	7440-09-7	
Selenium	7782-49-1	20
Silicon		800
Silver	7440-22-4	40
Sodium	7440-23-5	4000
Strontium		
Thallium	7440-28-0	400
Titanium		400
Tin		
Vanadium	7440-62-2	200
Yttrium		
Zinc	7440-66-6	40
Cyanide		1.5
Sulfide		2.5
Conductivity		2.0 uhmos/cm

Note: Compounds with detection limits are analyzed by this method.
Compounds without detection limits can be analyzed by a special SAS request.

SC = Specific conductance value

APPENDIX E

WELL LOGS OF THE AREA OF THE SITE

INSTRUCTIONS TO LES

White Copy -
Ill. Dept. of Public Health
Yellow Copy - Well Contractor
Blue Copy - Well Owner

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dug ☐ Bored ☒ Hole Diam. 42 in. Depth 40' ft.
Curb material ☐ Buried Slab: Yes ☒ No ☐
b. Driven ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.
c. Drilled ☐ Finished in Drift ☐ In Rock ☒
Tubular ☐ Gravel Packed ☒
d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:

Building ☐ Ft. Seepage Tile Field ☐
Cess Pool ☐ Sewer (non Cast iron) ☐
Privy ☐ Sewer (Cast iron) ☐
Septic Tank ☐ Barnyard ☐
Leaching Pit ☐ Manure Pile ☐

3. Well furnishes water for human consumption? Yes ☒ No ☐

4. Date well completed 11-75

5. Permanent Pump Installed? Yes ☒ Date 11-75 No ☐

Manufacturer VALLEY STEEL Type 3 1/2" Location ☐

Capacity 12 gpm. Depth of Setting 36' Ft.

6. Well Top Sealed? Yes ☒ No ☐ Type ☐

7. Pitless Adapter Installed? Yes ☐ No ☒

Manufacturer BAKER Model Number ☐

How attached to casing? CLAMP

8. Well Disinfected? Yes ☒ No ☐

9. Pump and Equipment Disinfected? Yes ☒ No ☐

10. Pressure Tank Size 20 gal. Type WELL-X-TROL

Location BASEMENT

11. Water Sample Submitted? Yes ☐ No ☒

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property

Address ☐

Driller ☐

11. Permit

12. Water from

at depth 27 to 29 ft. Formation/Gravel

14. Screen: Diam. ☐ in.

Length: ☐ ft. Slot ☐

Sec. ☐

Twp. ☐

Rge. ☐

Elev. ☐

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	PLASTIC	+1	-14
36"	CONCRETE	-14	-50

SHOW
LOCATION IN
SECTION PLAT
SE SW NW

16. Size Hole below casing: ☐ in.

17. Static level ☐ ft. below casing top which is ☐ ft.
above ground level. Pumping level ☐ ft. when pumping at ☐
gpm for ☐ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
TOP SOIL	3	3
YELLOW CLAY	11	14
SANDY CLAY	4	18
HARD PAN	5	23
BLUE CLAY & GRAVEL	1	24
BLUE CLAY	14	38

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Joseph Reynolds DATE 11-75

White Copy -
Ill. Dept. of Public Health
Yellow Copy - Well Contractor
Blue Copy - Well Owner

INSTRUCTIONS TO DRILLERS

LOG 3

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE
DEPARTMENT OF PUBLIC HEALTH, BUREAU OF ENVIRONMENTAL HEALTH, 535 WEST
JEFFERSON, SPRINGFIELD, ILLINOIS, 62701. DO NOT DETACH GEOLOGICAL/WATER
SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
a. Dug ☐ Bored ☒ Hole Diam. 4 1/2 in. Depth 35 ft.
Curb material ☐ Buried Slab: Yes ☐ No ☐
b. Driven ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.
c. Drilled ☐ Finished in Drift ☐ In Rock ☐
Tubular ☐ Gravel Packed ☒
d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
Building 90 Ft. Seepage Tile Field ☐
Cess Pool ☐ Sewer (non Cast iron) ☐
Privy ☐ Sewer (Cast iron) ☐
Septic Tank ☐ Barnyard ☐
Leaching Pit ☐ Manure Pile ☐

3. Is water from this well to be used for human consumption?
Yes ☒ No ☐
4. Date well completed 12-74
5. Permanent Pump Installed? Yes ☐ No ☐
Manufacturer SACUZZI Type 1/2 h.p. sub.
Capacity 10 gpm Depth of setting 30 ft.
6. Well Top Sealed? Yes ☒ No ☐
7. Pitless Adaptor Installed? Yes ☒ No ☐
8. Well Disinfected? Yes ☒ No ☐
9. Water Sample Submitted? Yes ☐ No ☒

REMARKS: Pressure tank:
~~Agate~~ aga-gense in house

IDPH 4.065
10-72
KNB-1

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property

Address

Driller

11. Permit No.

12. Water from

Formation

at depth 14 to ☐ ft.

14. Screen: Diam. ☐ in.

Length: ☐ ft. Slot ☐

Sec.

Twp

Rge.

Elev.

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
<u>6"</u>	<u>PLASTIC</u>	<u>71</u>	<u>-10</u>
<u>3 1/2"</u>	<u>CONCRETE</u>	<u>-10</u>	<u>-35</u>

SHOW
LOCATION IN
SECTION PLAT

NE NWNW

16. Size Hole below casing: ☐ in.
17. Static level ☐ ft. below casing top which is ☐ ft.
above ground level. Pumping level ☐ ft. when pumping at ☐
gpm for ☐ hours.

18.	FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
	<u>TOP SOIL</u>	<u>4</u>	<u>✓</u>
	<u>YELLOW CLAY</u>	<u>7</u>	<u>11</u>
	<u>SANDY CLAY</u>	<u>3</u>	<u>14</u>
	<u>YELLOW CLAY</u>	<u>5</u>	<u>19</u>
	<u>HARD PAN</u>	<u>8</u>	<u>27</u>
	<u>BLUE CLAY</u>	<u>8</u>	<u>35</u>

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED

Deane Cook

DATE

1-75

INSTRUCTIONS TO OFFICERS

White Copy -
Ill. Dept. of Public Health
Yellow Copy - Well Contractor
Blue Copy - Well Owner

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dug ☐ Bored ☒ Hole Diam. 42 in. Depth 41 ft.
Curb material ☐ Buried Slab: Yes ☐ No ☐
b. Driven ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.
c. Drilled ☐ Finished in Drift ☐ In Rock ☒
Tubular ☐ Gravel Packed ☐
d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:

Building ☐ Ft. Seepage Tile Field ☐
Cess Pool ☐ Sewer (non Cast Iron) ☐
Privy ☐ Sewer (Cast Iron) ☐
Septic Tank ☐ Barnyard ☐
Leaching Pit ☐ Manure Pile ☐

3. Well furnishes water for human consumption? Yes ☒ No ☐4. Date well completed 11-755. Permanent Pump Installed? Yes ☐ Date ☐ No ☐Manufacturer ☐ Type ☐ Location ☐Capacity ☐ gpm. Depth of Setting ☐ Ft.6. Well Top Sealed? Yes ☒ No ☐ Type ☐7. Pitless Adapter Installed? Yes ☒ No ☐Manufacturer BAKER Model Number ☐How attached to casing? CLAMP8. Well Disinfected? Yes ☐ No ☐9. Pump and Equipment Disinfected? Yes ☐ No ☐10. Pressure Tank Size ☐ gal. Type ☐Location ☐11. Water Sample Submitted? Yes ☐ No ☐

REMARKS: HOUSE TO BE BUILT ON
NEXT SPRING.

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-responsive Ex. 9

10. Property

Address ☐Driller ☐

11. Permit

12. Water from

at depth ☐ to ☐ ft.14. Screen: Diam. ☐ in.Length: ☐ ft. Slot ☐Twp ☐Rge ☐Elev ☐

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	PLASTIC	+1	-10
36"	CONCRETE	-10	-41

SHOW
LOCATION IN
SECTION PLAT
NW NENW

16. Size Hole below casing: ☐ in.

17. Static level ☐ ft. below casing top which is ☐ ft.
above ground level. Pumping level ☐ ft. when pumping at ☐
gpm for ☐ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
TOP SOIL		3
YELLOW CLAY		14
SAND & GRAVEL		15
HARD PAN		21
BLUE CLAY		41
LIMESTONE		

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Joseph E. Gould DATE 11-75

White Copy -
Ill. Dept. of Public Health
Yellow Copy - Well Contractor
Blue Copy - Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dug ☐ Bored ☒ Hole Diam. 42" in. Depth 56 ft.
Curb material ☐ Burled Slab: Yes ☒ No ☐
b. Driven ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.
c. Drilled ☐ Finished in Drift ☐ In Rock ☐
Tubular ☐ Gravel Packed ☒

d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:

Building ☐ Ft. Seepage Tile Field ☐
Cess Pool ☐ Sewer (non Cast iron) ☐
Privy ☐ Sewer (Cast iron) ☐
Septic Tank ☐ Barnyard ☐
Leaching Pit ☐ Manure Pile ☐

3. Well furnishes water for human consumption? Yes ☒ No ☐4. Date well completed 10-825. Permanent Pump Installed? Yes ☒ Date 10-82 No ☐

Manufacturer DAIT Type 5HP Location ☐

Capacity 10 gpm. Depth of Setting 52' Ft.

6. Well Top Sealed? Yes ☒ No ☐ Type ALUM CAP7. Pitless Adapter Installed? Yes ☒ No ☐

Manufacturer BAKER Model Number 100MG

How attached to casing? NUT

8. Well Disinfected? Yes ☐ No ☒9. Pump and Equipment Disinfected? Yes ☐ No ☒10. Pressure Tank Size 42 gal. Type WELL-X-TRAC

Location BASEMENT

11. Water Sample Submitted? Yes ☐ No ☒

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-responsive Ex. 9

10. Property

Address

Driller

11. Permit No.

12. Water from

Formation

at depth ☐ to ☐ ft. 42'

Sec

Tw

Rg

Ele

14. Screen: Diam. ☐ in.Length: ☐ ft. Slot ☐

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
<u>6"</u>	<u>PLASTIC</u>	<u>+1</u>	<u>-19</u>
<u>36"</u>	<u>CONCRETE</u>	<u>-14</u>	<u>56</u>

SHOW
LOCATION IN
SECTION PLAT
NW NW SW

16. Size Hole below casing: ☐ in.17. Static level ☐ ft. below casing top which is ☐ ft. above ground level. Pumping level ☐ ft. when pumping at ☐ gpm for ☐ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
<u>TOP SOIL</u>	<u>2</u>	
<u>YELLOW CLAY</u>	<u>14</u>	
<u>SANDY CLAY</u>	<u>19</u>	
<u>HARD PAN</u>	<u>25</u>	
<u>BLUE CLAY</u>	<u>41</u>	
<u>SAND & GRAVEL</u>	<u>42</u>	
<u>DRIFT</u>	<u>56</u>	

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Joseph R. Reynolds DATE 10-82

White C.
Ill. Dept. of Public Health
Yellow Copy - Well Contractor
Blue Copy - Well Owner

INSTRUCTION TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE
DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST
JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER
SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

LOG 6

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dug ☐ Bored ☒ Hole Diam. Y in. Depth 70 ft.
Curb material ☐ Burled Slab: Yes ☒ No ☐
b. Driven ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.
c. Drilled ☐ Finished in Drift ☒ In Rock ☐
Tubular ☐ Gravel Packed ☒
d. Grout: ☐

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:

Building ☐ Ft. Seepage Tile Field ☐
Cess Pool ☐ Sewer (non Cast iron) ☐
Privy ☐ Sewer (Cast iron) ☐
Septic Tank ☐ Barnyard ☐
Leaching Pit ☐ Manure Pile ☐

3. Well furnishes water for human consumption? Yes ☒ No ☐

4. Date well completed 9/10/74

5. Permanent Pump Installed? Yes ☐ Date ☐ No ☐

Manufacturer ☐ Type ☐ Location ☐
Capacity ☐ gpm. Depth of Setting ☐ Ft.

6. Well Top Sealed? Yes ☐ No ☐ Type ☐

7. Pitless Adapter Installed? Yes ☐ No ☐

Manufacturer ☐ Model Number ☐
How attached to casing? ☐

8. Well Disinfected? Yes ☐ No ☐

9. Pump and Equipment Disinfected? Yes ☐ No ☐

10. Pressure Tank Size ☐ gal. Type ☐
Location ☐

11. Water Sample Submitted? Yes ☐ No ☐

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-responsive Ex. 9

10. Property

Address

Driller

11. Permit

12. Water for

Formation
at depth 48 to 51 ft.

14. Screen: Diam. ☐ in.

Length: ☐ ft. Slot ☐

Sec.

Twp.

Rge.

Elev

SHOW
LOCATION IN
SECTION PLAT
NE NW SW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
<u>6</u>	<u>pl</u>	<u>0</u>	<u>10</u>
<u>36</u>	<u>con.</u>	<u>10</u>	<u>70</u>

16. Size Hole below casing: ☐ in.

17. Static level ☐ ft. below casing top which is ☐ ft.
above ground level. Pumping level ☐ ft. when pumping at ☐
gpm for ☐ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
<u>0 - 21 sand & y. cl.</u>		
<u>21 - 34 yel. clay</u>		
<u>34 - 48 Brown sand & c.</u>		
<u>48 - 51 sand (light)</u>		
<u>51 - 67 Brown clay</u>		
<u>67 - 70 Black slate</u>		
<u>Rock at 70</u>		

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED R. Bergschneider DATE 11/15/79

INSTRUCTIONS TO DRILLERS

White Copy -
Ill. Dept. of Public Health
Yellow Copy - Well Contractor
Blue Copy - Well Owner

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE
DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST
JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER
SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dug ☐ Bored ☒ Hole Diam. 4.5" in. Depth 40' ft.
Curb material ☐ Buried Slab: Yes ☒ No ☐
- b. Driven ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.
- c. Drilled ☐ Finished in Drift ☐ In Rock ☐
Tubular ☐ Gravel Packed ☒
- d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:

Building ☐ Ft. Seepage Tile Field ☐

Cess Pool ☐ Sewer (non Cast iron) ☐

Privy ☐ Sewer (Cast iron) ☐

Septic Tank ☐ Barnyard ☐

Leaching Pit ☐ Manure Pile ☐

3. Well furnishes water for human consumption? Yes ☐ No ☐4. Date well completed ☐5. Permanent Pump Installed? Yes ☐ Date ☐ No ☐Manufacturer ☐ Type ☐ Location ☐Capacity ☐ gpm. Depth of Setting ☐ Ft.6. Well Top Sealed? Yes ☒ No ☐ Type CAST ALUM7. Pitless Adapter Installed? Yes ☒ No ☐Manufacturer BAKER Model Number 184MCHow attached to casing? CLAMP8. Well Disinfected? Yes ☐ No ☐9. Pump and Equipment Disinfected? Yes ☐ No ☐10. Pressure Tank Size ☐ gal. Type ☐Location ☐11. Water Sample Submitted? Yes ☐ No ☐

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property

Address

Driller

11. Permit No.

12. Water from

Formation ☐at depth 19' to ☐ ft.14. Screen: Diam. ☐ in.Length: ☐ ft. Slot ☐

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	PLASTIC	+1	-12
36"	CONCRETE	-12	-40

SHOW
LOCATION IN
SECTION PLAT
SW NE NW

16. Size Hole below casing: ☐ in.17. Static level ☐ ft. below casing top which is ☐ ft.above ground level. Pumping level ☐ ft. when pumping at ☐gpm for ☐ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
TOP SOIL	2	
YELLOW CLAY	14	
SANDY CLAY	19	
HARD PAN	23	
BLUE CLAY	40'	

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Joseph Reynolds DATE 4-81

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dug ☐ Bored ☒ Hole Diam. 4 1/4 in. Depth 38 ft.
Curb material ☐ Buried Slab: Yes ☒ No ☐
b. Driven ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.
c. Drilled ☐ Finished in Drift ☒ In Rock ☐
Tubular ☐ Gravel Packed ☒
d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:

Building ☐ Ft. Seepage Tile Field ☐
Cess Pool ☐ Sewer (non Cast iron) ☐
Privy ☐ Sewer (Cast iron) ☐
Septic Tank ☐ Barnyard ☐
Leaching Pit ☐ Manure Pile ☐

3. Well furnishes water for human consumption? Yes ☒ No ☐

4. Date well completed October, 1979

5. Permanent Pump Installed? Yes ☒ Date 10/79 No ☐

Manufacturer Valley Type 1/2 HP Location Basement Well

Capacity 12 gpm. Depth of Setting 31 Ft.

6. Well Top Sealed? Yes ☒ No ☐ Type ☐

7. Pitless Adapter Installed? Yes ☒ No ☐

Manufacturer Baker Model Number ☐

How attached to casing? Clamp

8. Well Disinfected? Yes ☐ No ☐

9. Pump and Equipment Disinfected? Yes ☐ No ☐

10. Pressure Tank Size 42 gal. Type Well-Pak

Location house

11. Water Sample Submitted? Yes ☐ No ☐

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Proper

Address

Driller

11. Permi

12. Water

at depth 30 to ☐ ft.

14. Screen: Diam. ☐ in.

Length: ☐ ft. Slot ☐

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
10	Plastic	+1	-14
36	Concrete	-15	-38

SHOW
LOCATION IN
SECTION PLAT
SW SW SE

16. Size Hole below casing: ☐ in.

17. Static level ☐ ft. below casing top which is ☐ ft.
above ground level. Pumping level ☐ ft. when pumping at ☐
gpm for ☐ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top Soil	03'	3
Yellow Clay	15'	18
Sandy Clay	11'	29
Sand & Gravel	3'	32
Drift	6'	38

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED

Joseph K. Reynolds
Cook & Reynolds Well Drilling, Inc.

DATE October, 1979

White Copy -
Ill. Dept. of Public Health
Yellow Copy - Well Contractor
Blue Copy - Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE
DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST
JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER
SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dug ☐ Bored ☒ Hole Diam. 4 1/2 in. Depth 44 ft.
Curb material ☐ Buried Slab: Yes ☒ No ☐
b. Driven ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.
c. Drilled ☐ Finished in Drift ☐ In Rock ☐
Tubular ☐ Gravel Packed ☒
d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:

Building ☐ Ft. Seepage Tile Field ☐
Cess Pool ☐ Sewer (non Cast iron) ☐
Privy ☐ Sewer (Cast iron) ☐
Septic Tank ☐ Barnyard ☐
Leaching Pit ☐ Manure Pile ☐

3. Well furnishes water for human consumption? Yes ☒ No ☐4. Date well completed 4-815. Permanent Pump Installed? Yes ☒ Date 4-81 No ☐

Manufacturer VALLEY Type KHP Location

Capacity 12 gpm. Depth of Setting 40' Ft.

6. Well Top Sealed? Yes ☒ No ☐ Type CAST ALUM7. Pitless Adapter Installed? Yes ☒ No ☐

Manufacturer BAKER Model Number 15MM6

How attached to casing? CLAMP

8. Well Disinfected? Yes ☐ No ☐9. Pump and Equipment Disinfected? Yes ☐ No ☐10. Pressure Tank Size 42 gal. Type WELL-X-TROL

Location BASEMENT

11. Water Sample Submitted? Yes ☐ No ☐

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property

Address

Driller

11. Permit

12. Water from

Formation

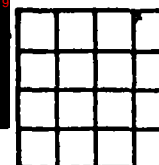
at depth ☐ to ☐ ft.14. Screen: Diam. ☐ in.Length: ☐ ft. Slot ☐

Sec

Tw

Rge

Elev.



SHOW
LOCATION IN
SECTION PLAT
NW NE NE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	PLASTIC	+1	-11
36"	CONCRETE	-11	-44

16. Size Hole below casing: ☐ in.17. Static level ☐ ft. below casing top which is ☐ ft.

above ground level. Pumping level ☐ ft. when pumping at ☐ gpm for ☐ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
TOP SOIL	2	
YELLOW CLAY	14	
SANDY CLAY	19	
HARD PAN	24	
BLUE CLAY	42	
SAND + GRAVEL	44	

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Joseph R. Reynolds DATE 5-81

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

White Copy -
Ill. Dept. of Public Health
Yellow Copy - Well Contractor
Blue Copy - Well Owner

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dug ☐ Bored ☒ Hole Diam. 42 in. Depth 36 ft.
Curb material ☐ Buried Slab: Yes ☒ No ☐
b. Driven ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.
c. Drilled ☐ Finished in Drift ☐ In Rock ☐
Tubular ☐ Gravel Packed ☒
d. Grout:

(KIND)	FROM (FT.)	TO (FT.)

2. Distance to Nearest:

Building ☐ Ft. Seepage Tile Field ☐
Cess Pool ☐ Sewer (non Cast iron) ☐
Privy ☐ Sewer (Cast iron) ☐
Septic Tank ☐ Barnyard ☐
Leaching Pit ☐ Manure Pile ☐

3. Well furnishes water for human consumption? Yes ☒ No ☐

4. Date well completed 5/85

5. Permanent Pump Installed? Yes ☒ Date 5/85 No ☐

Manufacturer Tait Type 1/2 HP Location

Capacity 10 gpm. Depth of Setting 30 Ft.

6. Well Top Sealed? Yes ☒ No ☐ Type Cast Iron

7. Pitless Adapter Installed? Yes ☒ No ☐

Manufacturer Baker Model Number 1 BAW 6

How attached to casing? ☐

8. Well Disinfected? Yes ☒ No ☐

9. Pump and Equipment Disinfected? Yes ☒ No ☐

10. Pressure Tank Size ☐ gal. Type ☐

Location ☐

11. Water Sample Submitted? Yes ☐ No ☐

REMARKS:

County # 21001

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property

Address

Driller

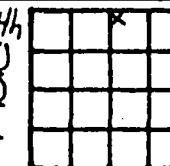
11. Permit

12. Water from

at depth ☐ to ☐ ft.14. Screen: Diam. ☐ in.Length: ☐ ft. Slot ☐

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	Plastic	+1	-12
36"	Concrete	-12	-36

Sec. 29.4hTwp. 18NRge. 5WElev. ☐

SHOW
LOCATION IN
SECTION PLAT
NW NE

16. Size Hole below casing: ☐ in.17. Static level ☐ ft. below casing top which is ☐ ft.above ground level. Pumping level ☐ ft. when pumping at ☐gpm for ☐ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top Soil		-2
Yellow Clay		-14
Sandy Clay		-19
Yellow Clay		-27
Sand		-28
Blue Clay		-36

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED

Joseph Reynolds

DATE

6/85